TRAFFIC STUDY

For

Fuerte Ranch Estates (TM 5343RPL2, GPA 03-006, REZ 03-017)

in the County of San Diego

Submitted To:

Reynolds Communities

Submitted By:

Darnell & Associates, Inc.

Revised: November 20, 2006

Revised: April 13, 2006 Revised: December 6, 2004

Revised: May 21, 2004 Original: October3, 2003



November 20, 2006

Philip R. Conard Jr. **Reynolds Communities** 1908 Friendship Drive, Suite A El Cajon, CA 92020

Subject:

Revised Traffic Study for Fuerte Ranch Estates (TM 5343) Located on 26.87 Acres at the

Southeast Corner of Fuerte Drive and Damon Lane in the County of San Diego.

Dear Mr. Conard Jr.:

In response to the County of San Diego's Comment Letter dated September 14, 2006, Darnell & Associates, Inc. (D&A) has revised our April 13, 2006 traffic study for the subject project. This version of the report also addresses the latest comments received from the project team on November 20, 2006. A copy of our written responses to each of the County's comments have been attached directly behind the transmittal letter and in Appendix I.

This report provides and assessment of the impacts associated with the proposed Fuerte Ranch Estates located on 26.87 acres at the southeast corner of Fuerte Drive and Damon Lane in the County of San Diego. This report analyzes the traffic impacts associated with the proposed project on local roadways and intersections under existing, existing plus project, and 2030 with and without project conditions.

If you have any questions, please feel free to contact this office.

Sincerely,

DARNELL & ASSOCIATES, INC.

Vicki S. Haskell, P.E.

Senior Transportation Engineer

RCE 63754

BED/vsh

030204-Fuerte Ranch Estates-Rpt7 (Nov 06)/11-06

Date Signed:

11-20-06

D&A Ref. No: 030204

TRANSPORTATION PLANNING & TRAFFIC ENGINEERING

MEMORANDUM

DATE:

November 20, 2006

TO:

Philip R. Conard Jr., Reynolds Communities

FROM:

Vicki S. Haskell, P.E.

D&A Ref. No: 030204

RE:

Fuerte Ranch Estates (TM 5343RPL2) - Responses to County Comments

Darnell & Associates, Inc. (D&A) has reviewed the County of San Diego's September 14, 2006 comments on our April 13, 2006 traffic study for Fuerte Ranch Estates. The following summarizes our responses to each of the County's comments. These responses have been incorporated into our November 2006 report.

Comment 1:

Operational issues/concerns on Fuerte Drive have been brought to the attention of County Traffic Operations staff by residents along Fuerte Drive. County staff is currently working with the Fuerte Drive Residential Traffic Committee to address their issues/concerns. The traffic study should summarize the Fuerte Drive traffic operation issues and identify mitigation measures to address project's impacts to traffic operations along Fuerte Drive. Bob Goralka, County Traffic Engineer, can be contacted at 858-874-4202 for further information regarding the Fuerte Drive traffic operation issues.

Response 1:

Per discussions with Bob Goralka, the traffic issues regarding Fuerte Drive are on going and a report/document summarizing the issues is not available at this time. Mr. Goralka indicated that the primary concern of residents has been with regards to the speeds along Fuerte Drive. The speed surveys conducted by the County for Fuerte Drive have been referenced in the Sight Distance discussion provided in Section V (see page 31) and a copy of the speed surveys have been provided in Appendix A of the November 2006

Additional concerns that have been raised by the community with regards to traffic in the area are addressed in Section VII of the report. Section VII has been revised to include a reference to the on going work with the County and residents along Fuerte Drive (see the last paragraph of page 36).

Comment 2:

As identified on page 37, the County's Traffic Advisory Committee (TAC) - [contact Maria Rubio-Lopez, DPW (0338) at 858-874-4030] must review the proposed stop signs at the project's access points ant eh proposed parking restriction along Fuerte Driver. The Board of Supervisor must approve the proposed stop signs and parking restriction.

Response 2:

The on-site roads are proposed to be public roads thus the project access points will be intersections of a public-to-public road. Typically, Board approval is required to install a stop sign at the intersection of a public-to-public road. Fuerte Drive is a through street, and Board direction approval for stop signs on public roads intersecting through streets Since the Damon Lane/Fuerte Farms Road-Project Access has been provided. intersection is already stop-controlled on the eastbound approach, the installation of a stop sign on the project access (westbound) approach will not change the flow of existing traffic. (See Section V, Page 30, 3rd paragraph.)

030204-Response to County 09-14-06 Comments-memo-rev2/11-06

Additional community concerns with traffic issues in the area and a reference to the County's on-going study is provided in Section VII of the report (see page 36.)

- Page 28-Project access-the analysis for the need for left turns from Fuerte Drive to the project access and Damon Lane appear in part to be based on the proposed stop signs and/or parking restrictions. The proposed stop signs and/or parking restrictions may not be approved. Provide an analysis where the proposed stop signs and/or parking restrictions are not approved.
- Response 3: See the response to Comment 2. In addition, the assessment for the need for the left turn lanes has been expanded to show that even if 100% of the project traffic were to utilize either of the driveways, a left turn lane would not be required (see Section V, page 31, paragraphs 2 and 3.)

The parking restrictions are needed to improve the existing sight distance at the Fuerte Drive/Damon Lane intersection. . Since the proposed project will add traffic to Damon Lane, the developer will submit a request to the Traffic Advisory Committee (TAC) to restrict parking along the south side of Fuerte Drive for approximately 240 feet west of Damon Lane. (See Section V, "Sight Distance", page 33, 1st full paragraph.)

- Comment 4: Page 29-Spacing-see DPW draft requirements for the need to submit a Request for an Exception to a Road Standard and/or Modification to Project Conditions.
- Response 4: County staff has advised the project's Civil Engineer that the spacing between the proposed project entrance and the driveways on the north side of Fuerte Drive is not an issue, and that the project conditions will be written in a way that does not preclude the proposed project entrance from being located as shown on the Tentative Map. However, a note has been added to Section V, "Driveway Spacing" to indicate that the developer will be required to file for a design exception for the driveway spacing. (See page 31, 5th paragraph.)
- Comment 5: Page 30-Sight Distance provide the 85th percentile speeds for Fuerte Drive as a guide to determine sight distance. Note that the proposed stop signs and/or parking restrictions may not be approved.
- Response 5: The traffic study has been revised to reference the speed surveys for Fuerte Drive provided by the County. Since the 85th percentile speed (43.2 mph) is less than the design speed for the road (45 mph), the design speed was utilized to assess the required sight distance. The parking restrictions along the south side of Fuerte Drive for approximately 240 feet west of Damon Lane are needed to provide adequate sight distance. Since the proposed project will add traffic to Damon Lane, the developer will submit a request to the Traffic Advisory Committee (TAC) for the parking restrictions. It is noted that the parking restriction may not be approved. (See Section V, "Sight Distance", page 32, 4th paragraph.)
- **Comment 6:** Figure 10-see DPW draft requirements relative to the project access to wit: "What is the purpose of providing a funnel-fan out type design as opposed to the standard public road intersection with no funnel-fan out?"
- **Response 6:** This is an improvement plan item and is being addressed by the project's Civil Engineer. No revisions have been made to the traffic study to address this comment.

Please feel free to contact the office if you have any questions regarding the above responses.

TRAFFIC STUDY

FOR

FUERTE RANCH ESTATES (TM 5343RPL2, GPA 03-006, REZ 03-017)

IN THE COUNTY OF SAN DIEGO

Submitted To:

REYNOLDS COMMUNITIES 1908 FRIENDSHIP DRIVE, SUITE A EL CAJON, CA 92020

Submitted By:

Darnell & Associates, Inc. 1446 Front Street, Third Floor San Diego, CA 92101 619-233-9373

November 20, 2006
030204-Fuerte Ranch Estates-Rpt7 (Nov 06)/11-06

TABLE OF CONTENTS

PARTICULAR DE CARACTERISTA DE	_
EXECUTIVE SUMMARY	
SECTION I - INTRODUCTION	
PROJECT DESCRIPTION	2
CONGESTION MANAGEMENT PROGRAM	2
SCENARIOS STUDIED	
LEVEL OF SERVICE	
ANALYSIS METHODOLOGY	
REPORT ORGANIZATION	6
SECTION II - EXISTING CONDITIONS	
EXISTING ROADWAY CHARACTERISTICS	
ROADWAY SEGMENT DAILY TRAFFIC	9
KEY INTERSECTIONS	
INTERSECTION TRAFFIC COUNTS	9
EXISTING LEVEL OF SERVICE CONDITIONS	
Roadway Segments	
Intersections	
SECTION III - PROJECT RELATED CONDITIONS	13
TRIP GENERATION	
TRIP DISTRIBUTION/TRIP ASSIGNMENT	
SECTION IV - IMPACTS	
PUBLIC FACILITIES ELEMENT IN COUNTY	
LEVELS OF SIGNIFICANCE STANDARDS	
Roadway Segments	
Signalized Intersections	
Unsignalized Intersections	
EXISTING PLUS PROJECT CONDITIONS	
Roadway Segments	
Intersections	
CUMULATIVE CONDITIONS	
2030 CONDITIONS	
2030 Roadway Network	
2030 Traffic Volumes	
2030 Levels of Service	
Roadway Segments	
Intersections	
SECTION V - PROJECT ACCESS & ON-SITE CIRCULATION	
PROJECT ACCESS	
DRIVEWAY SPACING	
ON-SITE CIRCULATION	
SIGHT DISTANCE	
SECTION VI - CONSTRUCTION TRAFFIC	
SECTION VII - COMMUNITY CONCERNS/ISSUES	
VALLE DE ORO COMMUNITY PLANNING GROUP	35
COMMUNITY COMMENTS	38
SECTION VIII - MITIGATION	39
DIRECT IMPACTS	39
Roadway Segments	39
Intersections	
CUMULATIVE IMPACTS	
FUTURE IMPACTS	
Roadway Segments	
Intersections	30
PROJECT MITIGATION	
Roadway Segments	
Intersections	
SECTION IX - SUMMARY OF FINDINGS AND CONCLUSIONS	
BECTION IA "BURIRIAR I OF FINDINGS AND CONCLUSIONS	

LIST OF FIGURES

Figure 1 - Vicinity Map	3
Figure 2 - Site Plan	4
Figure 3 - Existing Conditions	
Figure 4 - Existing Traffic Volumes	
Figure 5 - Project Trip Distribution Percentages & Project Related Traffic	
Figure 6 - Existing + Project Traffic Volumes	18
Figure 7 - 2030 Conditions	23
Figure 8 - 2030 Base Traffic Volumes	25
Figure 9 - 2030 Plus Project Traffic Volumes	26
Figure 10 - Conceptual Striping Plan Fuerte Drive Project Access	41
Figure 11 - Conceptual Striping Plan Damon Lane Project Access	42
LIST OF TABLES	
Table 1 - Level of Service Ranges	5
Table 2 - Existing Roadway Segment Daily Level of Service Summary	11
Table 3 - Existing Intersection Level of Service Summary	
Table 4 - Trip Generation Rates and Calculations Summary	13
Table 5 - Measures of Significant Project Impacts	15
Table 6 - Existing + Project Roadway Segment Daily Level of Service Summary	20
Table 7 - Existing + Project Intersection Level of Service Summary	21
Table 8 - 2030 Roadway Segment Daily Level of Service Summary	27
Table 9 - 2030 Intersection Level of Service Summary	28
Table 10 - Project Access Level of Service Summary	30
Table 11 - Transportation Impact Fee (TIF) Summary	39

APPENDICIES

APPENDIX A

➤ AM/PM Peak Hour Traffic Counts
➤ 24-Hour Machine Counts

➤ SANDAG Trip Generation Rates

County of San Diego Level of Service Thresholds

County of San Diego Guidelines for Determining Significance

> Excerpts from the Public Facility Element

➤ Forecast Volumes

➤ County TIF Fee for the Valle De Oro Region

APPENDIX B

➤ Existing Conditions Worksheets

APPENDIX C

> Existing + Project Conditions Worksheets

APPENDIX D

≥ 2030 Base Worksheets

APPENDIX E

➤ 2030 + Project Conditions Worksheets

APPENDIX F

➤ Project Access Analysis Worksheets

APPENDIX G

➤ Sight Distance Photos

APPENDIX H

> Collision Records

> Speed Survey for Fuerte Drive

APPENDIX I

➤ Responses to County Comments

EXECUTIVE SUMMARY

The developer proposes to construct 40 single-family estate homes (Fuerte Ranch Estates) on a 26.87 acre site located at the southeast corner of Fuerte Drive and Damon Lane in the County of San Diego. The project site's current zoning is A72, an agricultural use with a minimum lot size of four acres to yield a potential of six (6) lots (i.e. 26.87 acres ÷ 1 lot per 4 acres = 6.7 lots). Since the project proposes to construct 34 more lots than the site is currently zoned for a re-zone is required.

As this report will show, the proposed Fuerte Ranch Estates is estimated to generate 480 average daily trips, 38 AM peak hour trips, and 48 PM peak hour trips. The project does not have any direct or future impacts. The project is part of a potential cumulative impact; therefore, it would be required to pay the County Transportation Impact Fee (TIF).

Section VIII of this report summarizes the recommended mitigation measures for the project's cumulative impacts.

SECTION I - INTRODUCTION

PROJECT DESCRIPTION

The proposed Fuerte Ranch Estates is located on a 26.87 acre site at the southeast corner of Fuerte Drive and Damon Lane in the County of San Diego. Currently, the project site is occupied by a poultry farm. With the development of the proposed project, the existing poultry farm will be demolished. The project site's current zoning is A72, an agricultural use with a minimum lot size of four acres to yield a potential of six (6) lots (i.e. 26.87 acres ÷ 1 lot per 4 acres = 6.7 lots). The project proposes to construct 40 single-family estate homes, 34 more lots than the site is currently zoned for and will thus require a re-zone. It should be noted that the proposed site usage is consistent with the County's GP2020 plan. Figure 1 shows the regional location of the project and Figure 2 shows the proposed site plan.

CONGESTION MANAGEMENT PROGRAM

Based on the approval of Proposition 111 in 1990, regulations require the preparation, implementation and annual updating of a Congestion Management Program (CMP) in each of California's urbanized counties. The original CMP for the San Diego region was adopted in 1991 and has been updated periodically as an element of the Regional Transportation Plan (RTP). One required element of the CMP is a process to evaluate the transportation and traffic impacts of large projects on the regional transportation system. That process is undertaken by local agencies, project applicants and traffic consultants through a transportation impact report usually conducted as part of the CEQA project review process. Authority for local land use decisions including project approvals and any required mitigation remains the responsibility of local jurisdictions.

The criteria for which a project is subject to the regulations as set forth in the CMP are determined by the trip generation potential for the project. Currently, the threshold is 2,400 average daily trips (ADT) or 200 peak hour trips. The proposed Fuerte Ranch Estates generates 480 average daily trips, 38 AM peak hour trips, and 48 PM peak hour trips (see Section III), and is therefore, not subject to CMP guidelines for traffic impact studies.

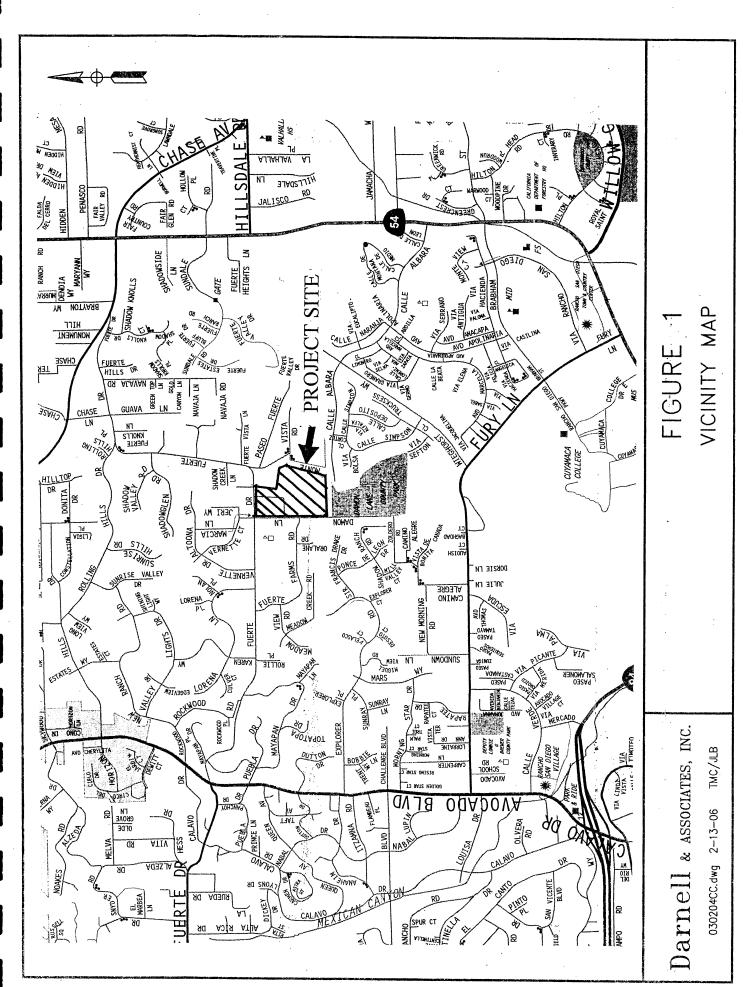
SCENARIOS STUDIED

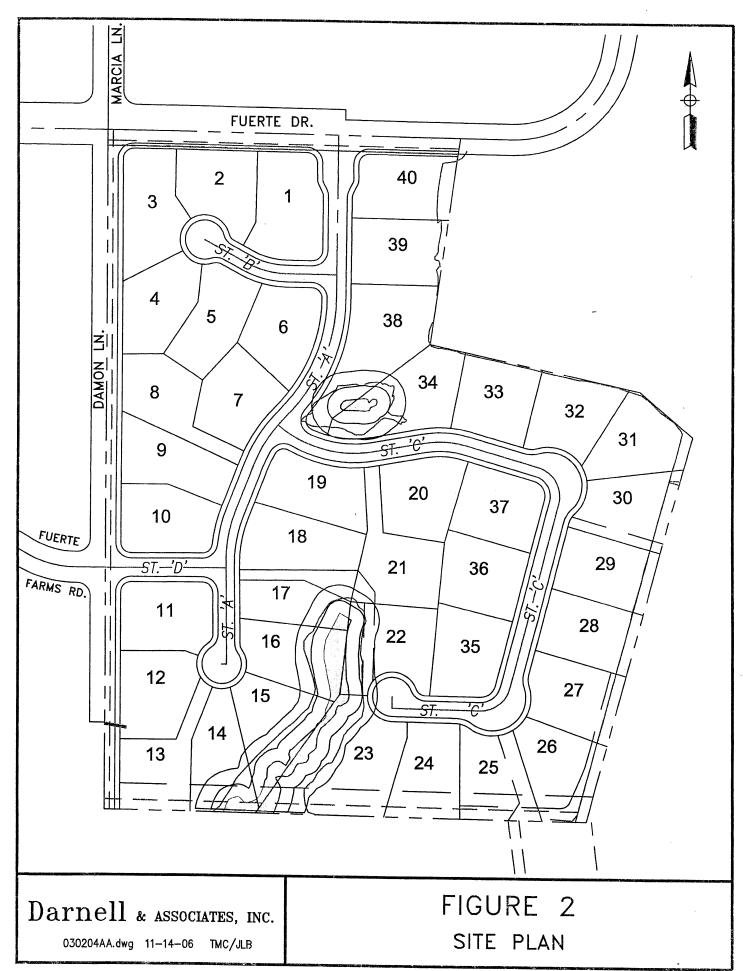
The traffic scenarios analyzed in this report are identified as follows:

<u>Existing Conditions</u> refers to that condition which exists on the ground today, including existing traffic counts and existing lane configurations at intersections and on roadway segments.

Existing Plus Project Conditions refers to that condition which includes the project traffic added onto existing volumes. Analysis is first conducted using the existing street configurations, and mitigation is added if required.

2030 Base Conditions refers to that condition which will exist in the Year 2030 when the project site is developed based on its current zone designation of A72, an agricultural use with a minimum lot size of four acres to yield a potential of six (6) lots on the 26.87 acre site. With the exception of Chase Avenue and State Route 94 (SR94) east of Avocado Boulevard, all roadway segments in the vicinity of the project are already built out to their ultimate Circulation Element classification, therefore they were analyzed utilizing their existing lane configurations and traffic control. Chase Avenue was assumed to be built out to its ultimate classification of a four-lane Major Road under 2030 conditions and SR94 east of Avocado was assumed to be built out to a four lane Freeway. This scenario shows the impact without the project.





<u>2030 Plus Project Conditions</u> refers to that condition which will exist in the Year 2030 when the project site is re-zoned to allow the development of the proposed project. This scenario shows the impact with the project.

LEVEL OF SERVICE

Level of Service (LOS) is a professional industry standard by which the operating conditions of a given roadway segment or intersection are measured. Level of Service is defined on a scale of A to F; where LOS A represents the best operating conditions and LOS F represents the worst operating conditions. LOS A facilities are characterized as having free flowing traffic conditions with no restrictions on maneuvering or operating speeds; traffic volumes are low and travel speeds are high. LOS F facilities are characterized as having forced flow with many stoppages and low operating speeds. Table 1 shows the average daily traffic volumes (ADT) and delay ranges that are equivalent to each level of service.

	Table	1 - Level of Service Ranges	
	Inters	ections	Roadway Segments
LOS	Signalized- Delay (Seconds/Vehicle) ¹	Unsignalized Delay (Seconds/Vehicle) ¹	Average Daily Traffic (ADT) ²
Α	Less than or Equal to 10.0	Less than or Equal to 10.0	Less Than 1,900
В	10.1 to 20.0	10.1 to 15.0	1,900 to 4,100
С	20.1 to 35.0	15.1 to 25.0	4,100 to 7,100
D	35.1 to 55.0	25.1 to 35.0	7,100 to 10,900
Е	55.1 to 80.0	35.1 to 50.0	10,900 to 16,200
F	Greater Than 80.0	· Greater Than 50.1	Greater Than 16,200

¹ The delay ranges shown are based on the 2000 Highway Capacity Manual (HCM)

LOS = Level of Service

According to page XII-4-15 of the San Diego County General Plan *Public Facility Element* "A LOS 'C', which allows for stable traffic flow with room to maneuver, is a generally accepted level to strive for in new development. ... However, there are some cases where development cannot achieve a LOS "C" on off-site roadways. For instance, there are areas where the existing development pattern precludes the addition of lanes or other mitigation or when the community is opposed to certain improvements to maintain a LOS 'C'. ... In these cases a Level of Service 'D' is acceptable on off-site roadways." A copy of excerpts from the County's *Public Facility Element* can be found in Appendix A.

ANALYSIS METHODOLOGY

The roadway segment daily LOS was determined by comparing the traffic volumes under each traffic scenario to the capacity of the roadway according to its roadway cross-section and classification. For the purpose of this report, the daily traffic volumes of the roadway segments in the vicinity of the project (as presented in Figure 4) were compared to the County of San Diego Level of Service classification thresholds. The daily (24 hour) traffic count sheets and a copy of the "Summary of County of San Diego Public Road Standards" are included in Appendix A.

The Highway Capacity Software (HCS), version 5.2 was utilized to analyze the morning and afternoon peak hour conditions of the intersections in the project vicinity. The signalized intersection methodology

² The volume ranges are based on the County of San Diego Circulation Element of a Light Collector, the average daily volume ranges for the other roadway classifications has been provided in Appendix A.

defines LOS based on delay using variables such as lane configuration, traffic volumes and signal timings. The unsignalized intersection methodology defines LOS based on the longest delay experienced by any single movement. Since the HCS program calculates the average delay per vehicle, there may be instances where the HCS analysis will show a reduction in delay with the addition of more traffic. This phenomenon occurs when the additional traffic is added to a movement that experiences a shorter amount of delay, thereby decreasing the intersections average delay per vehicle (i.e. a larger amount of vehicles will have to wait a shorter time while only a few vehicles have to wait an extended period of time). It should be noted, however, that even if the addition of traffic results in a lower average intersection delay per vehicle, the total delay at the intersection will gradually increase as more traffic is added to the intersection. The measure of effectiveness utilized within this report is the average intersection delay, not the total intersection delay. It should be noted that this version of the HCS is based on the methodologies outlined in the 2000 Highway Capacity Manual (HCM).

REPORT ORGANIZATION

Following this section, Section II evaluates the existing roadway characteristics and traffic conditions surrounding the project area. Section III examines the potential trips generated by the proposed project and it defines the trip distribution assumptions. Section IV analyzes the traffic for existing plus project, and 2030 conditions with and without the proposed project. Section V addresses the project access and on-site circulation. Section VI discusses the project's construction traffic. Section VII addresses the concerns/issues of the Valle De Oro Community Planning Group's letter dated November 19, 2003. Section VIII provides recommended mitigation measures and Section IX summarizes the report's findings and conclusions.

SECTION II - EXISTING CONDITIONS

This section of the traffic study is intended to assess the existing conditions of the roadways and intersections within the vicinity of the project to determine travel flow and/or delay difficulties, if any, that exist prior to adding the traffic generated by the proposed project. The existing conditions analysis establishes a base condition which is used to assess the other scenarios discussed in this report.

Darnell & Associates, Inc. (D&A) conducted a field review of the area surrounding the project in February 2003 and again in December 2004. The existing roadway geometrics and traffic control are illustrated in Figure 3.

EXISTING ROADWAY CHARACTERISTICS

The key segments analyzed in the study area are identified below:

<u>State Route 94 (SR94):</u> State Route 94 is currently constructed as an east-west four (4) lane (two lanes each direction) freeway west of Avocado Boulevard and as a four (4) lane (two lanes each direction) Major Road east of Avocado Boulevard. Ultimately, Caltrans plans to improve the segment of SR94 from Avocado Boulevard easterly to the Sweetwater River to freeway standards.

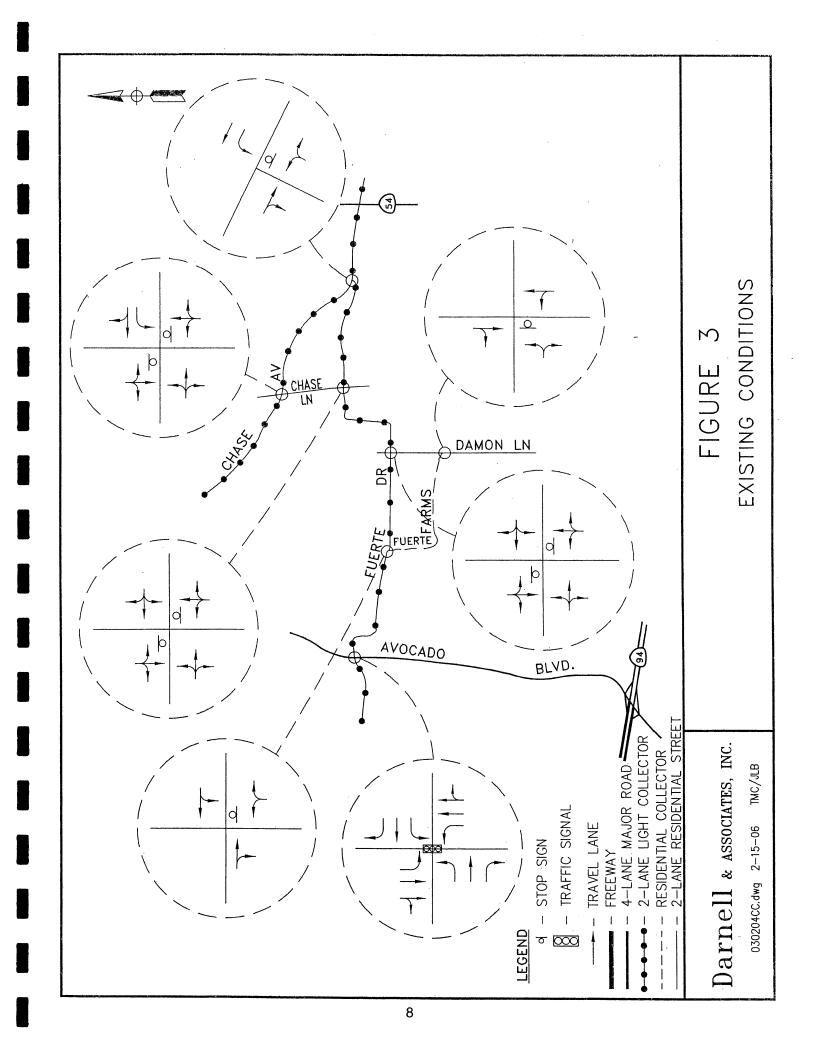
Avocado Boulevard (SF 1398): Avocado Boulevard is a north/south four (4) lane (two lanes each direction) Circulation Element roadway with bike lanes and a center two-way left-turn lane. The current width of Avocado Boulevard in the vicinity of Fuerte Drive is approximately 68 feet. The posted speed limit on Avocado Boulevard is 45 miles per hour. The existing and ultimate cross-section of Avocado Boulevard is equivalent to that of a four-lane Major Road with bike lanes and a capacity of 33,400 average daily trips (ADT) at LOS D.

Fuerte Drive (SA 920): Fuerte Drive is an east/west two (2) lane (one lane each direction) Circulation Element roadway with bike lanes. In front of the school located just west of Damon Lane, a center two-way left-turn lane is provided along Fuerte Drive. The current width of Fuerte Drive at its intersection with Damon Lane is approximately 40 feet (two 14-foot travel lanes, a 4-foot shoulder on the south side, and an 8-foot shoulder on the north side. The posted speed limit on Fuerte Drive is between 25 to 35 miles per hour. The existing and ultimate cross-section of Fuerte Drive is equivalent to that of a Light Collector with bike lanes and a capacity of 10,900 ADT at LOS D.

<u>Fuerte Farms Road:</u> Fuerte Farms Road is a windy two (2)-lane (one lane each direction) non-Circulation Element public roadway with a painted centerline and no shoulder. Fuerte Farms Road is approximately 36 feet wide curb to curb. The current cross-section of Fuerte Farms Road is equivalent to a residential collector road.

Damon Lane: Damon Lane is a non-Circulation Element public road with approximately 18 feet of pavement with an asphalt curb on the west side of the roadway and no painted centerline. No parking is allowed on the westside of Damon Lane. On the east side of Damon Lane there is a varying shoulder width of eight (8) to fifteen (15) feet which is utilized for parking.

Chase Avenue (SA 910): Chase Avenue is an east/west two (2) lane (one lane each direction) Circulation Element Roadway with bike lanes. The current width of Chase Avenue is approximately 45 feet. Chase Avenue has a posted speed limit of 45 miles per hour. The existing cross-section of Chase Avenue is equivalent to that of a Light Collector with bike lanes, capacity of 10,900 ADT at LOS D. The ultimate classification of Chase Avenue is a Major Road with bike lanes, capacity of 33,400 ADT at LOS D.



ROADWAY SEGMENT DAILY TRAFFIC

Daily traffic volumes (24-hour) were collected in January 2006 for all key roadway segments. Daily traffic volumes for State Route 94 were obtained from the Caltrans website. Figure 4 illustrates the existing traffic volumes of the key roadways segments. Count summaries are included in Appendix A.

KEY INTERSECTIONS

Figure 3 provides intersection configurations and traffic control for the key intersections. The key intersections analyzed include:

- Avocado Boulevard/Fuerte Drive (signalized);
- Fuerte Drive/Fuerte Farms Road (stop-controlled on the north and southbound approaches);
- Fuerte Drive/Damon Lane (stop-controlled on the north and southbound approaches);
- Fuerte Drive/Chase Lane (stop-controlled on the north and southbound approaches);
- Fuerte Drive/Chase Avenue (stop-controlled on the northbound approach);
- Chase Avenue/Chase Lane (stop-controlled on the north and southbound approaches); and
- Damon Lane/Fuerte Farms Road (stop-controlled on the eastbound approach).

INTERSECTION TRAFFIC COUNTS

Morning and afternoon peak hour traffic counts were conducted at each of the key intersections on a typical weekday in January 2006. Figure 4 presents the existing conditions peak hour traffic volumes used in this analysis. Count summaries are included in Appendix A.

EXISTING LEVEL OF SERVICE CONDITIONS

Roadway Segments

The existing daily roadway segment levels of service are summarized in Table 2. As can be seen in Table 2, the following roadway segments operate at LOS E under existing conditions: (1) Chase Avenue west of Chase Lane; and (2) Chase Avenue east of Fuerte Drive. State Route 94 east of Avocado Boulevard currently operates at LOS F. All other roadway segments analyzed operate at an acceptable LOS D or better.

Intersections

The existing levels of service for the key intersections are summarized in Table 3. A copy of the HCS worksheets for existing conditions can be found in Appendix B. As can be seen from Table 3, the northbound approach at the Chase Avenue/Chase Lane intersections currently operate at LOS D during the AM peak hour and LOS E during the PM peak hour. All other intersections analyzed operate at an acceptable level of service D or better during all peak periods.

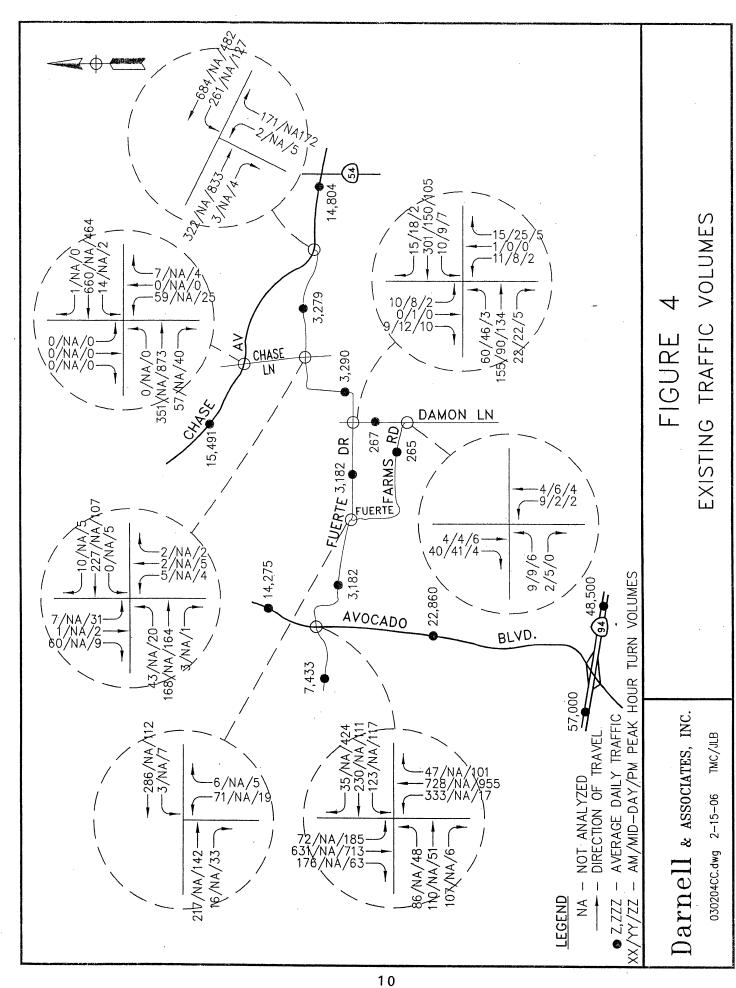


Table 2 - Existing Roadw	ay Segn	nent Daily Lev	el of Service Summary	
Roadway Segment	Class	Capacity (a)	Average Daily Traffic (ADT)	LOS
Avocado Boulevard				
-North of Fuerte Drive	4M	33,400	14,275	Α
-South of Fuerte Drive	4M	33,400	22,860	В
Fuerte Drive				
-West of Avocado Boulevard	LC	10,900	7,433	D
-Avocado Boulevard to Fuerte Farms Road	LC	10,900	3,182	В
Fuerte Farms Road to Damon Lane	LC	10,900	3,182 -	В
-Damon Lane to Chase Lane	LC	10,900	3,290	В
-Chase Lane to Chase Avenue	LC	10,900	3,279	В
Fuerte Farms Road ^(c)				
-Fuerte Drive to Damon Lane	RC	4,500	265	< C
Damon Lane ^(c)				
-South of Fuerte Drive	RS	1,500	267	< C
Chase Avenue				
-West of Chase Lane	LC ·	10,900	15,491	E
- East of Fuerte Drive	LC	10,900	14,804	E
State Route 94				
-West of Avocado Boulevard	4F	(b)	57,000	С
-East of Avocado Boulevard	4M	33,400	48,500	F

⁽a) Capacity is based on the upper limit of LOS D per the County of San Diego Level of Service Thresholds

(b) The levels of service for SR94 were determined based on the Caltrans District 11 procedures. See Appendix B for the calculations

LOS = Level of Service; 4F = 4-Lane Freeway; 4M = 4-Lane Major Road; LC = Light Collector; RS = Residential Street; RC=Residential Collector

⁽c) Level of Service Thresholds are not typically applied to non-circulation element roads since their primary purpose is to serve abutting lots, not carry through traffic. The capacity shown here is the recommended upper limit of LOS C. < C = the traffic volume is less than the upper limit for LOS C; > C = the traffic volume is greater than the upper limit for LOS C.

Table	3 - Existing Intersecti	on Level o	f Servi	ce Summai	у		
		AM Pe	ak	Mid-Day	Peak	PM Pea	ak
Intersection	Critical Movement	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
Avocado Blvd. @ Fuerte Dr. (Signalized)	Intersection	36.8	D	NA	NA	34.7	С
Fuerte Dr. @ Fuerte Farms Rd. (One-Way Stop-Controlled)	Northbound Approach	24.2	С	NA	NA	10.4	В
	Eastbound Approach	9.3	A	7.9	A	7.4	A
Fuerte Dr. @ Damon Ln.	Westbound Approach	8.0	A	7.6	A	- 7.5	A
(Two-Way Stop-Controlled)	Northbound Approach	24.9	С	10.4	В	9.4	A
	Southbound Approach	28.5	D	11.6	В	9.1	A
	Eastbound Approach	7.9	A			7.5	A
Fuerte Dr. @ Chase Ln.	Westbound Approach	7.6	A	NA	NA	7.7	A
(Two-Way Stop-Controlled)	Northbound Approach	13.8	В	I NA	INA	11.6	В
	Southbound Approach	10.9	В			11.8	В
Fuerte Drive @ Chase Ave.	Westbound Left	8.8	A	NA NA	NA	10.5	В
(One-Way Stop-Controlled)	Northbound Approach	12.5	В	INA	INA	28.0	D
	Eastbound Approach	9.0	A			8.3	A
Chase Ave. @Chase Ln. (Two-Way Stop-Controlled)	Westbound Approach	8.2	A	NA	NA	10.0	A
(1 wo- way Stop-Controlled)	Northbound Approach	32.6	D			41.4	E
Fuerte Farms Rd @ Damon Ln (One-Way Stop-Controlled)	Eastbound Approach	9.0	A	8.8	A	8.7	A
LOS = Level of Service; sec/veh =	= seconds of delay per vehicl	e; $NA = Not A$	Analyzed				

SECTION III - PROJECT RELATED CONDITIONS

TRIP GENERATION

The trip generation potential for the proposed project is based on daily and peak hour trip generation rates obtained from the (Not So) Brief Guide of Traffic Generators for the San Diego Region published by the San Diego Association of Governments (SANDAG) in April 2002. Utilizing the SANDAG rates and the characteristics of the proposed project, estimates of daily and peak hour traffic volumes generated by the project can be calculated. Table 4 summarizes the trip generation rates and volumes for the proposed project.

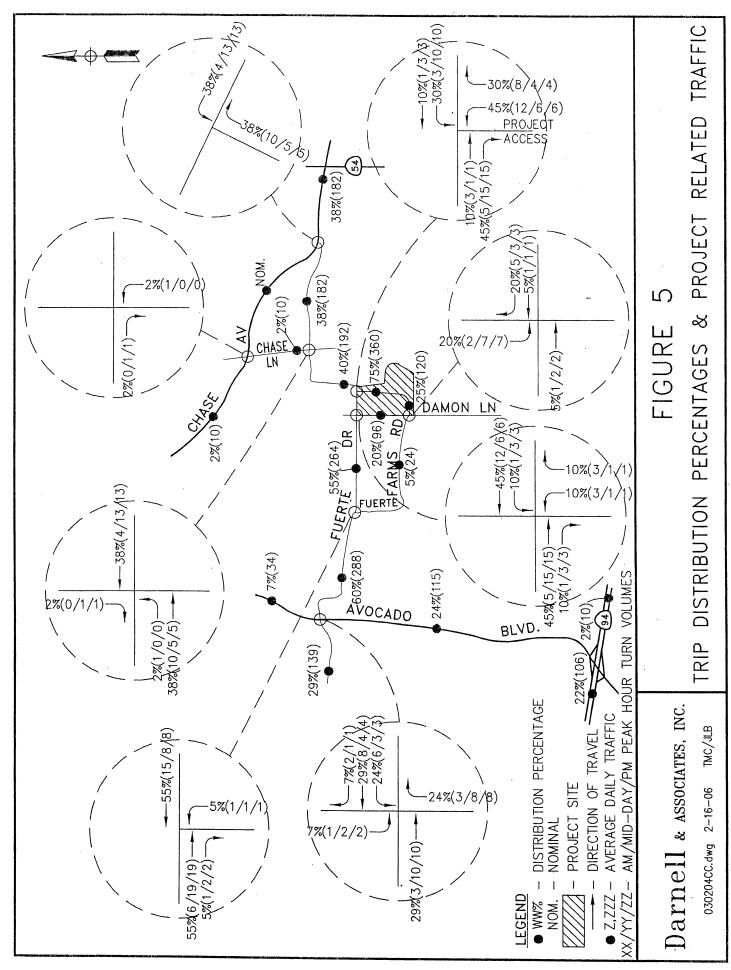
As shown in Table 4, the proposed Fuerte Ranch Estates is estimated to generate 480 average daily trips, 38 AM peak hour trips, and 48 PM peak hour trips, an increase of 408 daily trips, 32 AM peak hour trips, and 41 PM peak hour trips over the current zoning. Since the project site is currently occupied by a poultry farm, which generates nominal traffic, no traffic credits were given for the existing use of the site (i.e. all 480 daily trips generated by the proposed project were assumed to be brand new trips).

Table 4 -	Trip Gene	ration I	Rates and Ca	alculati	ons Sum	mary		
	1	Trip Ge	neration Rate	es				
			AM P	eak Hou	ır	PM P	eak Hou	r
Land Use	Dail	У	Total - % of Daily	%In	%Out	Total - % of Daily	%In	%Out
Estate Residential	12 Trip	s/DU	8%	3%	7%	10%	7%	3%
		Tríp	Generation					
. 171	Total No.	D. '1	AM P	eak Hou	ır	PM P	eak Hou	ır
Land Use	of Units	Daily	Total	In	Out	Total	In	Out
Current Zoning (A72)								
Estate Residential	6 DUs	72	6	2	4	7	5	2
Proposed Zoning								
Estate Residential	40 DUs	480	38	11	27	48	34	14
Difference (Proposed-Current)	34 DUs	408	32	9	23	41	29	12
Trip Generation Rates are based or	rates publis	shed by S	SANDAG; DU	= Dwe	lling Unit			

SANDAG does not have a published mid-day peak hour trip generation rate for residential dwelling units, however, for the purpose of this report, the mid-day peak hour trip generation was assumed to be equivalent to the PM peak hour of generation.

TRIP DISTRIBUTION/TRIP ASSIGNMENT

The trip distribution percentages for the project were based on the existing travel patterns and the location of typical trip purposes (i.e. schools, employment, shopping, etc.). The trip distribution percentages and project related traffic are illustrated in Figure 5. The impacts associated with the addition of project traffic are discussed in the following section, Section IV.



SECTION IV - IMPACTS

PUBLIC FACILITIES ELEMENT IN COUNTY

According to page XII-4-18 of the *Public Facility Element* for San Diego County, a discretionary project which has a significant impact on roadways will be required, as a condition of approval, to make "improvements or other measures necessary to mitigate traffic impacts to avoid reduction in the existing Level of Service below 'D' on off-site and on-site abutting Circulation Element roads. New development that would significantly impact congestion on roads at LOS "E" or "F", either currently or as a result of the project, will be denied unless improvements are scheduled to increase the LOS to "D" or better or appropriate mitigation is provided. Appropriate mitigation would include a fair share contribution in the form of road improvements or a fair share contribution to an established program or project. If impacts cannot be mitigated, the project will be denied unless a specific statement of overriding findings is made pursuant to Section 15091(b) and 15093 of the State CEQA Guidelines."

LEVELS OF SIGNIFICANCE STANDARDS

Although the *Public Facility Element* (PFE) sets standards as to which level of service roadways and intersections must operate within the County (i.e. requires operation of LOS D or better), it does not establish a threshold to evaluate whether a project is significant if it adds traffic to a roadway facility that is currently operating at an unacceptable LOS E or F. Thus, the County's *Guidelines for Determining Significance* (adopted September 26, 2006) were developed to evaluate the significance of traffic impacts on roadways and intersections which are currently operating at LOS E or F. A summary of the County's Guidelines is provided in Table 5. Excerpts from the County's Guidelines are provided in Appendix A.

	Table 5 - Mea	sures of Significant P	roject Impact	S	
	Allowab	le Increase on Congested Ro	ads and Intersecti	ons	
LOS	Intersections	3		Road Segments	
	Signalized	Unsignalized	2-Lane Road	4-Lane Road	6-Lane Road
LOS E	Delay of 2 seconds	20 peak hour trips on a critical movement	200 ADT	400 ADT	600 ADT
LOS F	Delay of 1 second, or 5 peak hour trips on a critical movement	5 peak hour trips on a critical movement	100 ADT	200 ADT	300 ADT

Notes:

- A critical movement is one that is experiencing excessive queues.
- By adding proposed project trips to all other trips from a list of projects, these same tables are used to determine if total cumulative impacts are significant. If cumulative impacts are found to be significant, each project that contributes any trips must mitigate a share of the cumulative impacts.
- The County may also determine impacts have occurred on roads even when a project's traffic or cumulative impacts do not trigger an unacceptable level of service, when such traffic uses a significant amount of remaining road capacity.

ADT = Average Daily Traffic; LOS = Level of Service, sec = Seconds of Delay per Vehicle

It should be noted that the significance thresholds summarized in Table 5 are currently only utilized by the County of San Diego to determine if a project has a significant direct and/or future impact. A project is considered to have a significant near term cumulative impact if it adds any traffic to a roadway segment and/or intersection that operates at LOS E or F under near term cumulative conditions.

The County guidelines also states that "For large projects, controversial projects and/or projects which are preparing Environmental Impact Reports, more detailed evaluations to verify the applicability of the

significance thresholds for the individual project conditions may be necessary. Additional evaluations may include analysis of vehicle headways, speeds, average gaps, queues, delay, and/or other factors."

Consistent with the *Public Facility Element* the criteria described below was only applied to segments and intersections that operate at LOS E or LOS F.

Roadway Segments

As shown in Table 5, per the County's Guidelines, a project would be considered to have a significant direct traffic volume and/or level of service traffic impact on a road segment if:

- "The additional or redistributed ADT generated by the proposed project will cause an adjacent or nearby County Circulation Element Road to operate below LOS D and will significantly increase congestion as identified in Table [5], and/or
- The additional or redistributed ADT generated by the proposed project will cause a residential street to exceed its design capacity, and/or
- The additional or redistributed ADT generated by the proposed project will significantly increase congestion on a Circulation Element Road, State Highway or intersection currently operating at LOS E or LOS F as identified in Table [5]."

As discussed on pages 12 and 13 of the County's *Guidelines for Determining Significance*, an increase of the daily thresholds established for roadway segments operating at LOS E would result in only one additional car every 2.4 minutes per lane while the thresholds established for roadway segments operating at LOS F would result in only one additional car every 4.8 minutes. Therefore, the thresholds identified in Table 5, in most cases, would result in changes to traffic flow that would not be noticeable to the average driver and would thus not constitute a significant impact on the roadway.

Signalized Intersections

At signalized intersections, the project would be considered to have a significant direct volume and/or level of service traffic impact if:

- "The additional or redistributed ADT generated by the proposed project will cause a signalized intersection to operate below LOS D and will significantly increase congestion as identified in Table [5], and/or
- The additional or redistributed ADT generated by the proposed project will significantly increase congestion on a signalized intersection currently operating at LOS E or LOS F as identified in Table [5]."

As discussed on page 15 of the County's Guidelines for Determining Significance, an increase in delay of two seconds, the threshold established for signalized intersections operating at LOS E, "...is a small fraction of the typical cycle length for a signalized intersection that ranges between 60 and 120 seconds. The likelihood of increased queues forming due to the additional two seconds of delay is low." Thus, the increase in delay of two (2) seconds, on average, would result in changes to traffic flow that would not be noticeable to the average driver and would thus not constitute a significant impact. Since small changes and disruptions to the traffic flow at a signalized intersection can have a greater effect on the overall

intersection operation when the intersection is operating at LOS F, versus LOS E, a more stringent guideline of one (1) second of delay was established for intersections operating at LOS F.

The five (5) peak hour trip threshold, established for the critical movement of a signalized intersection operating at LOS F, when spread out throughout the peak hour, results in an increase of one vehicle every 12 minutes or 720 seconds. This increase would not be noticeable to the average drive because one additional vehicle during a 12 minute interval, on average, would clear the traffic signal cycles well within the 12 minute period. Further, even if all five (5) additional peak hour vehicles arrived at the same time, these trips would also, on average, clear the traffic cycle and the existing queue lengths would be reestablished. Thus, the increase five (5) peak hour trips to a critical movement at a signalized intersection, on average, would result in changes to traffic flow that would not be noticeable to the average driver and would thus not constitute a significant impact. (See page 15 of the County's *Guidelines for Determining Significance* provided in Appendix A.)

Unsignalized Intersections

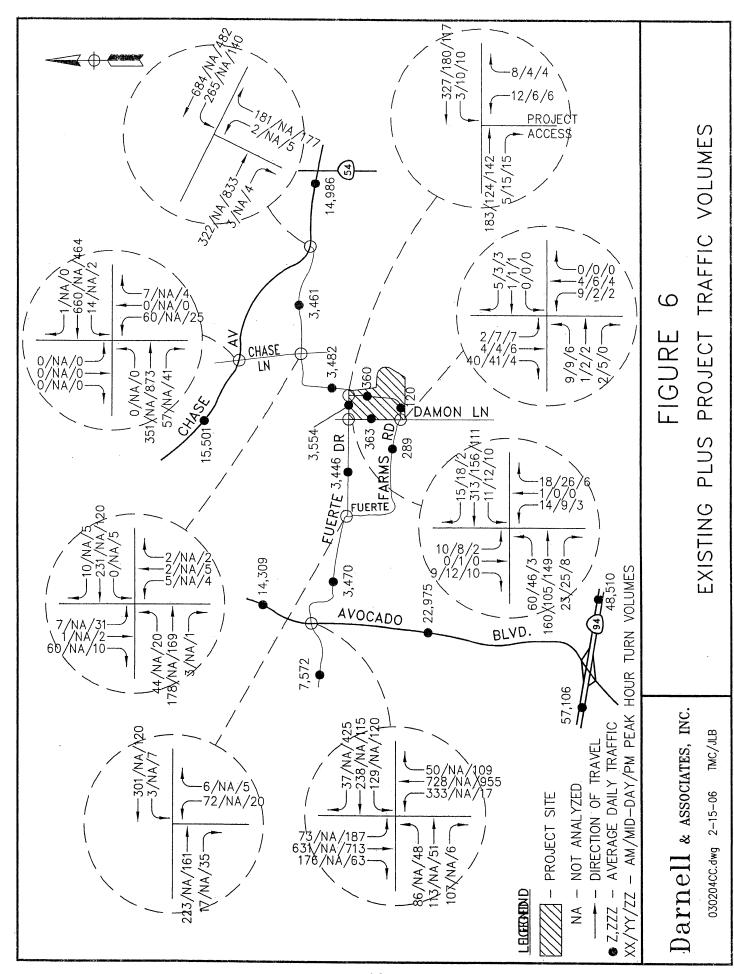
At unsignalized intersections, the project would be considered to have a significant direct volume and/or level of service traffic impact if:

- "The proposed project will generate 20 or more peak hour trips to a critical movement of an unsignalized intersection, and cause the unsignalized intersection to operate below LOS D, or
- The proposed project will generate 20 or more peak hour trips to a critical movement of an unsignalized intersection and the unsignalized intersection currently operates at LOS E, or
- The proposed project will generate 5 or more peak hour trips to a critical movement of an unsignalized intersection, and cause the unsignalized intersection to operate below LOS E, or
- The proposed project will generate 5 or more peak hour trips to a critical movement of an unsignalized intersection and the unsignalized intersection currently operates at LOS F, or
- Based upon an evaluation of existing accident rates, the signal priority list, intersection
 geometrics, proximity of adjacent driveways, sight distance and/or other factors, it is found that
 the generation rate less than those specified above would significantly impact the operations of
 the intersection."

As discussed on page 17 of the County's *Guidelines for Determining Significance*, the addition of 20 peak hour trips to a critical movement, the threshold established for an unsignalized intersection operating at LOS E, would result in an increase of one (1) vehicle every 3.0 minutes or 180 seconds. "Assuming the wait time for a vehicle in the critical movement queue is less than 3.0 minutes, which is typical for LOS E condition; this would not be noticeable to the average driver and would not be considered a significant impact." The five (5) peak hour trip threshold established for an unsignalized intersection operating at LOS F, would result in an increase of one (1) vehicle every 12.0 minutes or 720 seconds. "This typically exceeds the wait time in the queue and would not be noticeable to the average driver." (See page 17 of the County's *Guidelines for Determining Significance* provided in Appendix A.)

EXISTING PLUS PROJECT CONDITIONS

The daily and peak hour turn volumes for existing plus project conditions are illustrated in Figure 6.



Roadway Segments

The roadway segments were analyzed with the traffic generated from the proposed project added to existing traffic volumes. The roadway segments daily levels of service are summarized in Table 6. As shown in Table 6, the following roadway segments operate at LOS E or F under existing and existing plus project conditions:

- Chase Avenue West of Chase Lane (operates at LOS E);
- Chase Avenue East of Fuerte Drive (operates at LOS E); and
- State Route 94 east of Avocado Boulevard (operates at LOS F).

Under the PFE criteria, a significant impact would result if the project would "significantly impact congestion" on the road segments which currently operates at LOS E or F. The proposed project adds 182 two-way ADT or less to the above segments that operate at LOS E and 10 two-way ADT on the segment of SR94 that operates at LOS F. Since the project traffic added to the segments which operate at LOS E or F does not exceed the 200 ADT allowed per the County of San Diego's *Guidelines for Determining Significance* for a two-lane roadway operating at LOS E or the 200 ADT allowed per the County of San Diego's *Guidelines for Determining Significance* for a four-lane roadway operating at LOS F, it is concluded that the proposed project will not significantly impact congestion. Thus the proposed project does not have a significant direct impact on the above mentioned segments.

The remaining key roadway segments continue to operate at LOS D or better under existing plus project conditions.

Intersections

The existing plus project intersection level of service analysis is summarized in Table 7. A copy of the HCS worksheets for existing plus project conditions can be found in Appendix C. As can be seen from Table 7, the northbound approach at the Chase Avenue/Chase Lane intersection operates at LOS D during the AM peak hour and LOS E during the PM peak hour under existing and existing plus project conditions. Under the PFE criteria, a significant impact would result if the project would "significantly impact congestion" on this intersection which currently operates at LOS E or F. Since the addition of project traffic added to this intersection will increase the existing delay by 1 second or less and only adds one (1) vehicle to the northbound approach, which is less than that allowed per the County of San Diego's Guidelines for Determining Significance, it is concluded that the proposed project will not significantly impact congestion at this intersection. Therefore, the proposed project is not considered to have a significant direct impact on this intersection. All other key intersections operate at LOS D or better during all peak hours under existing plus project conditions.

Existing + Project LOS Significant A N/A B N/A B N/A B N/A B N/A C N/A C N/A C N/A C N/A C N/A C N/A F No C N/A	Table 6 - F	xisting	+ Project Roa	dway Seg	ment D	Table 6 - Existing + Project Roadway Segment Daily Level of Service Summary	ımmary			
A		Class	Canacity (a)	Existi	gu	Two-Way Project Traffic		Existi	ing + Project	
evard 4M 33,400 14,275 A 34 14,309 A N/A levard 4M 33,400 22,860 B 115 22,975 B N/A levard LC 10,900 3,182 B 288 3,470 B N/A pamon Lane LC 10,900 3,182 B 264 3,446 B N/A a Access LC 10,900 3,290 B 264 3,461 B N/A Avenue LC 10,900 3,290 B 192 3,482 B N/A Avenue LC 10,900 3,279 B 182 3,461 B N/A Avenue LC 10,900 2,57 C 24 289 C N/A Lame LC 10,900 1,5491 E 10 15,501 E No LC 10,900 1,4804 E 10 <	Koauway Segmem	Cidss	Capacity (a)	A.D.T.	SOT	A.D.T.	A.D.T.	TOS	Significant	Impact
evard 4M 33,400 14,275 A 34 115 22,975 B N/A levard LC 10,900 7,433 D 115 22,975 B N/A levard LC 10,900 3,182 B 264 3,476 B N/A se Lane LC 10,900 3,182 B 264 3,466 B N/A se Lane LC 10,900 3,290 B 264 3,466 B N/A Avenue LC 10,900 3,290 B 182 B N/A Avenue LC 10,900 3,279 B 182 3,461 B N/A Avenue LC 10,900 265 <c< td=""> 24 289 <c< td=""> N/A Lane LC 10,900 267 <c< td=""> 24 289 <c< td=""> N/A Lane LC 10,900 14,804 E 10<!--</td--><td>Avocado Boulevard</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></c<></c<></c<></c<>	Avocado Boulevard									
HAM 33,400 22,860 B 115 22,975 B N/A LC 10,900 7,433 D 139 7,572 D N/A Lame LC 10,900 3,182 B 264 3,446 B N/A ss LC 10,900 3,290 B 264 3,446 B N/A ss LC 10,900 3,290 B 264 3,446 B N/A ss LC 10,900 3,279 B 182 3,461 B N/A ss LC 10,900 2,65 <c< td=""> 24 289 <c< td=""> N/A RS 1,500 267 <c< td=""> 96 363 <c< td=""> N/A LC 10,900 14,804 E 182 14,986 E No LC 10,900 16,404 E No No No No AF (b)</c<></c<></c<></c<>	-North of Fuerte Drive	4M	33,400	14,275	A	34	14,309	Ą	N/A	None
Farms Road LC 10,900 7,433 D 139 7,572 D N/A Lane LC 10,900 3,182 B 288 3,470 B N/A Lane LC 10,900 3,182 B 264 3,446 B N/A Ss LC 10,900 3,290 B 192 3,482 B N/A LANE LC 10,900 3,279 B 182 3,461 B N/A RC 4,500 265 <c 10="" 10,4806="" 10,900="" 15,491="" 16,501="" 24="" 267="" 28="" 4,500="" 648,510="" <c="" a="" c="" e="" f="" lc="" n="" no="" no<="" rc="" td=""><td>-South of Fuerte Drive</td><td>4M</td><td>33,400</td><td>22,860</td><td>В</td><td>115</td><td>22,975</td><td>В</td><td>N/A</td><td>None</td></c>	-South of Fuerte Drive	4M	33,400	22,860	В	115	22,975	В	N/A	None
LC 10,900 7,433 D 139 7,572 D N/A Lane LC 10,900 3,182 B 264 3,446 B N/A Lane LC 10,900 3,290 B 264 3,554 B N/A LC 10,900 3,290 B 192 3,482 B N/A LC 10,900 3,279 B 182 3,461 B N/A LC 10,900 2,579 C 24 289 C N/A RS 1,500 267 C 24 289 C N/A LC 10,900 15,491 E 14,966 E No LC 10,900 14,804 E 162 3,106 C N/A HF (b) 57,000 C 10,600 F No HM 33,400 RF 10 NO HM 33,400 RF 10 NO HM 10,900 RF 10 NO HM 10,900 RF 10 NO HM 10,900 RF NO HM	Fuerte Drive									
Farms Road LC 10,900 3,182 B 288 3,470 B N/A Lame LC 10,900 3,182 B 264 3,446 B N/A ss LC 10,900 3,290 B 264 3,554 B N/A st LC 10,900 3,290 B 182 3,461 B N/A st LC 10,900 3,279 B 182 3,461 B N/A st 4,500 265 <c< td=""> 24 289 <c< td=""> N/A st 1,500 267 <c< td=""> 96 363 <c< td=""> N/A LC 10,900 15,491 E 10 16,366 E No LC 10,900 14,804 E 10 16,366 E No LC 10,900 14,804 E 10 14,986 E No 4M 33,400</c<></c<></c<></c<>	-West of Avocado Boulevard	ГС	10,900	7,433	D	139	7,572	D	N/A	None
Lane LC 10,900 3,182 B 264 3,446 B ss LC 10,900 3,290 B 264 3,554 B N/A ss LC 10,900 3,290 B 192 3,482 B N/A sc LC 10,900 3,279 B 182 3,461 B N/A sc 4,500 265 <c< td=""> 24 289 <c< td=""> N/A lc 10,900 267 <c< td=""> 96 363 <c< td=""> N/A lc 10,900 15,491 E 10 15,501 E No 4F (b) 57,000 C 16,306 C N/A 4M 33,400 48,500 F 10 N/A No</c<></c<></c<></c<>	-Avocado Boulevard to Fuerte Farms Road	rc	10,900	3,182	В	288	3,470	В	N/A	None
Size LC 10,900 3,290 B 264 3,554 B N/A	Fuerte Farms Road to Damon Lane	ГС	10,900	3,182	В	264	3,446	В		
LC 10,900 3,290 B 192 3,482 B N/A LC 10,900 2,65 C 24 289 C N/A RS 1,500 2,67 C 96 363 C N/A LC 10,900 15,491 E 100 15,501 E No LC 10,900 14,804 E 182 14,986 E No 4F (b) 57,000 C 106 57,106 C N/A 4M 33,400 48,500 F 10 48,510 F No To To To To To To To	-Damon Lane to Project Access	ГС	10,900	3,290	В	264	3,554	В	N/A	None
EC 10,900 3,279 B 182 3,461 B N/A RC 4,500 265 CC 24 289 CC N/A RS 1,500 267 CC 96 363 CC N/A LC 10,900 15,491 E 182 14,986 E No LC 10,900 14,804 E 182 14,986 E No 4F (b) 57,000 C 106 57,106 C N/A 4M 33,400 48,500 F 10 10 48,510 F No	-Project Access to Chase Lane	ГС	10,900	3,290	В	192	3,482	В	N/A	None
RS 4,500 265 <c< th=""> 24 289 <c< th=""> N/A RS 1,500 267 <c< td=""> 96 363 <c< td=""> N/A LC 10,900 15,491 E 10 15,501 E No LC 10,900 14,804 E 182 14,986 E No 4F (b) 57,000 C 106 57,106 C N/A 4M 33,400 48,500 F 10 48,510 F No</c<></c<></c<></c<>	-Chase Lane to Chase Avenue	ГС	10,900	3,279	В	182	3,461	В	N/A	None
RS 1,500 265 C 24 289 C N/A LC 10,900 267 C 96 363 C N/A LC 10,900 15,491 E 10 15,501 E No LC 10,900 14,804 E 182 14,986 E No 4F (b) 57,000 C 106 57,106 C N/A 4M 33,400 48,500 F 10 48,510 F No	Fuerte Farms Road ^(c)									
RS	-Fuerte Drive to Damon Lane	RC	4,500	265	< C	24	289	<c< td=""><td>N/A</td><td>None</td></c<>	N/A	None
RS 1,500 267 CC 96 363 CC N/A LC 10,900 15,491 E 10 15,501 E No LC 10,900 14,804 E 182 14,986 E No 4F (b) 57,000 C 106 57,106 C N/A 4M 33,400 F 10 48,510 F No	Damon Lane ^(c)									
LC 10,900 15,491 E 10 10,000 15,501 E No LC 10,900 14,804 E 182 14,986 E No 4F (b) 57,000 C 106 57,106 C N/A 4M 33,400 48,500 F 10 48,510 F No	-South of Fuerte Drive	RS	1,500	267	< C	96	363	<c< td=""><td>N/A</td><td>None</td></c<>	N/A	None
LC 10,900 15,491 E 10 10 E No LC 10,900 14,804 E 182 14,986 E No 4F (b) 57,000 C 106 57,106 C N/A 4M 33,400 48,500 F 10 48,510 F No	Chase Avenue									
LC 10,900 14,804 E 182 14,986 E No 4F (b) 57,000 C 106 57,106 C N/A 4M 33,400 48,500 F 10 48,510 F No	-West of Chase Lane	ГС	10,900	15,491	Ħ	10	15,501	E	No	None
4F (b) 57,000 C 106 57,106 C N/A 4M 33,400 F 10 F No	- East of Fuerte Drive	ΓC	10,900	14,804	E	182	14,986	E	No	None
4F (b) 57,000 C 106 S7,106 C N/A 33,400 48,500 F 10 48,510 F No	State Route 94									
4M 33,400 48,500 F 10 48,510 F No	-West of Avocado Boulevard	4F	(b)	57,000	ပ	106	57,106	C	N/A	None
	-East of Avocado Boulevard	4M	33,400	48,500	Ŧ	10	48,510	F	No	None

(a) Capacity is based on the upper limit of LOS D per the County of San Diego Level of Service Thresholds

(b) The levels of service for State Route 94 were determined based on the Caltrans District 11 procedures. See Appendix B & C for the calculation worksheets.

(c) Level of Service Thresholds are not typically applied to non-circulation element roads since their primary purpose is to serve abutting lots, not carry through traffic. The capacity shown here is the recommended upper limit of LOS C < C = the traffic volume is less than the upper limit for LOS C

Significance is based on the County of San Diego's Guidelines for Determining Significance

N/A = Not Applicable because segment operates at LOS D or better, LOS = Level of Service; 4F = 4-Lane Freeway; 4M = 4-Lane Major Road; LC = Light Collector, RS = Residential Street; RC=Residential Collector

				F	Table 7	١ ا	isting	1 + Pr	oject	Existing + Project Intersection Level of Service Summary	ectio	n Lev	rel of	Servi	ce Sui	mmai	ý						
				Existing	ting	1								H	Existing + Project	+ Proje	ot						
T. C.	Crit.	AM Peak	eak	Mid-Day	Day	PM P	M Peak		Ä	AM Peak				Mid	Mid-Day Peak	ak			Ь	PM Peak			
THE SECTION	Mov	Delay	TOS	Delay	TOS	Delay	SOT	Delay	SOT	Δ Delay	Proj. Trips	Sig.?	Delay	SOT	Δ Delay	Proj. Trips	Sig.?	Delay	SOT	Δ Delay	Proj. Trips	Sig.?	Impact
Avocado @ Fuerte Dr. (Signalized)	Int.	36.8	D	NA	NA	34.7	O	37.3	Q	0.5	23	N/A		Not	Not Analyzed	pa		34.9	O	0.2	28	N/A	None
	EB	9.3	A	7.9	∢	7.4	⋖	9.4	Α	0.1	9		7.9	A	0.0	18		7.5	A	0.1	18		
Fuerte @	WB	8.0	4	7.6	A	7.5	4	8.1	٧	0.1	13	<u> </u>	9.7	Ą	9.7	6	A/N	9.7	¥	0.1	6	A/A	None
Damon (TWSC)	SB BB	24.9	ပ	10.4	В	9.4	٧	28.7	Q	3.8	7	18/V	10.9	В	10.9	2	17/11	6.7	Ą	0.3	7		
()	SB	28.5	C	11.6	В	9.1	∢	30.8	D	2.3	0		11.9	В	11.9	0		9.2	A	0.1	0		
	EB	7.9	Ą			7.5	A	7.9	Α	0.0	11							9.7	¥	0.1	2		
Fuerte @	WB	9.7	Ą	;		7.7	A	7.7	A	0.1	4	<u> </u>		Ž	Mot Amalana	7		7.7	A	0.0	13		None
Chase Ln.	RB	13.8	В	N A	A A	11.6	В	14.0	В	0.2	0	N/A		Ö N	. Amanya	D D		11.8	В	0.2	0		A COLO
(1 w3C)	SB	10.9	В			11.8	В	10.9	В	0.0	0							12.0	В	0.2	1		
Fuerte @	WBL	8.8	Ą	;		10.5	В	8.8	A	0.0	4	A1/A		1017	Anolyz	7		9.01	В	0.1	13	N/A	None
Chase Ave.(OWSC)	NB NB	12.5	В	K Z	A V	28.0	Ω	12.7	B	0.2	10	t		0	NOL Allalyzeu	7.		28.8	Ω	8.0	5		
	EB	9.0	A			8.3	A	9.6	A	0.0	0							8.3	Ą	0.0	_		
Chase Ave. @	WB	8.2	¥	<u> </u>	5	10.0	∢	8.2	A	0.0	0	ź		Z	Not Analyzed	þ		10.0	A	0.0	0	Ž	None
Chase Ln.	NB	32.6	Ω	N A	N A	41.4	田	32.8	Ω	0.2	-	2		OF T	r umm y	į		41.4	Ħ	0.0	0	2	
	SB		ı			١		,	1	0.0									-	0.0	-		
Fuerte Farms @ Fuerte Dr (OWSC)	NB NB	24.2	၁	NA	NA	10.4	В	26.3	D	2.1	-	N/A		οN [Not Analyzed	pe,		10.7	В	0.3	-	N/A	None
Fuerte Farms @	EB	0.6	Α	8.8	A	8.7	А	9.2	Ą	0.2	_	N/A	9.2	A	0.4	2.0	N/A	9.1	V	9.4	7	N/A	None
Damon Ln (OWSC)	MB	1	,	1	•	,	-	8.6	A	•	9	N/A	8.6	А	9.8	4.0		8.6	A	8.6	4		
Delay = seconds of delay per vehicle, LOS = Level of Service, Δ	lay per	rehicle; I	= SO	Level of	Servic	e; A Del	ay = In(rease (I)ecreasi mificar	Delay = Increase (Decrease) in delay measured in seconds/vehicle	y meas ⊕ir) or	ured in	seconds/	/vehicle	nact.								
Sig.? = County of san Diego s Guidetines for Determiting significance, unpact = Significant Duck (Dir) of Communic (Com.) angles NI/A = Not Analyzakle because intersection operates at I OS D or better	Diego	s Guidell	nes Jor tion or	. <i>Determ.</i> Jerates at	e Sunui	grigicance Dor hetter	ce, unip er:	שנו – אוני	gmma	10000					5	-							
NA = Not Analyzed; NB = Northbound; SB = Southbound; EB =	NB = NC	rthboung	1; SB =	= Southb	ound; I	3B = Eas	tbound	WB = 1	Westbo	Eastbound: WB = Westbound; WBL = Westbound Left;	$T = W_{\epsilon}$	sstbounc	ı Left;										
OWSC = One-Way Stop-Controlled; ASWC = All-Way Stop-Controlled; Int. = Intersection	top-Cont	trolled; A	SWC Selected	= All-W	ay Stop	o-Contro	lled; In	t. = Inter	section														
Froj. 171ps – See Figu	IC 2 LOI	rioject	Notation	I I can II		the cut																	

CUMULATIVE CONDITIONS

The County of San Diego has developed an overall programmatic solution that addresses existing and projected future road deficiencies in the unincorporated portions of San Diego County. This program includes the adoption of a Transportation Impact Fee (TIF) program to fund improvements to roadways necessary to mitigate potential cumulative impacts caused by traffic from future development. Based on SANDAG regional growth and land use forecasts, the SANDAG Regional Transportation Model was utilized to analyze projected build-out (year 2030) development conditions on the existing circulation element roadways throughout the unincorporated areas of the County. Based on the results of the traffic modeling, funding necessary to construct transportation facilities that will mitigate cumulative impacts from new development was identified. Existing roadway deficiencies will be corrected through improvement projects funded by other public funding sources, such as TransNet, gas tax, and grants. Potential cumulative impacts to the region's freeways have been addressed in SANDAG's Regional Transportation Plan (RTP). This plan, which considers freeway buildout over the next 30 years, will use funds from TransNet, state, and federal funding to improve freeways to projected level of service objectives in the RTP.

The proposed project generates 480 new average daily trips. These trips will be distributed on circulation element roadways in the County that were analyzed by the TIF program, some of which currently or are projected to operate at inadequate levels of service. The potential growth represented by the proposed project was included in the growth projections upon which the TIF program is based. Therefore, payment of the TIF, which will be required at issuance of building permits, in combination with other components of the program described above, will mitigate potential cumulative traffic impacts to less than significant.

See Section VIII for the calculation of the Traffic Impact Fee that the proposed development will be required to pay to mitigate its potential cumulative impacts. Excerpts from the County's Transportation Impact Fee for the Valle de Oro area can be found in Appendix A.

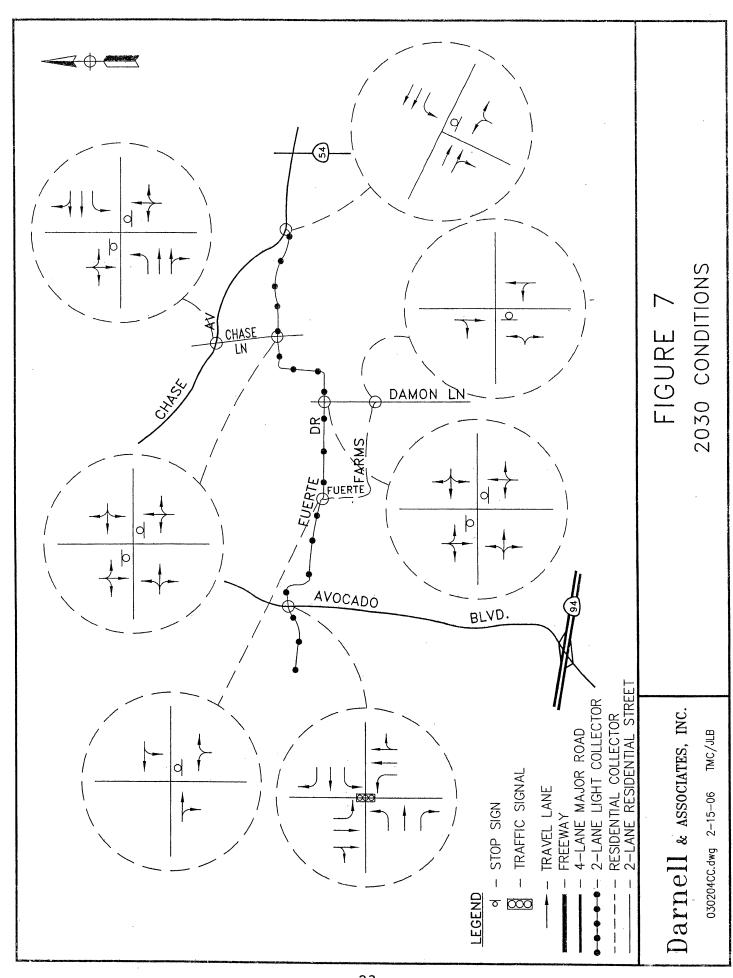
2030 CONDITIONS

2030 Roadway Network

With the exception of Chase Avenue and State Route 94 east of Avocado Boulevard, all roadway segments in the vicinity of the project are already built out to their ultimate Circulation Element classification, therefore they were analyzed utilizing their existing lane configurations and traffic control. Chase Avenue was assumed to be built out to its ultimate classification of a four-lane Major Road under 2030 conditions. State Route 94 east of Avocado Boulevard was assumed to be improved to the standards of a four-lane freeway. Figure 7 illustrates the lane configurations and traffic control that were assumed to exist in the Year 2030.

2030 Traffic Volumes

To analyze future forecasted traffic within the project area, traffic volumes for all segments, except for Fuerte Drive between Fuerte Farms Road and Damon Lane and Chase Avenue between Bernita Road and Chase Lane, were based on SANDAG's Series 10 model forecast. On the segments of Fuerte Drive between Fuerte Farms Road and Damon Lane and Chase Avenue between Bernita Road and Chase Lane volumes from the County's General Plan (GP)2020 forecasts for the year 2030 were utilized due to the SANDAG's Series 10 2030 model forecast being lower than existing traffic volumes on these segments. (A copy of the 2030 forecasts from the SANDAG 2030 and GP 2020 reports are provided in Appendix A.)



As previously discussed, the 2030 Base conditions taken from the SANDAG Series 10 assumed that the project site was developed under its current A72, agricultural zoning to support approximately 6 lots. Therefore, to get the 2030 plus project traffic volumes, the traffic associated with the development of an additional 36 lots (or 408 daily trips, 32 AM peak hour trips, and 41 PM peak hour trips) was added to the 2030 Base volumes. The 2030 Base and 2030 plus project daily and peak hour traffic volumes are illustrated in Figures 8 and 9, respectively.

2030 Levels of Service

Roadway Segments

The roadway segments were analyzed under 2030 with and without project traffic conditions. The roadway segments daily levels of service for 2030 conditions are summarized in Table 8. As shown in Table 8, the following roadway segments operate at LOS E or F under 2030 conditions with or without the proposed project:

- Fuerte Drive west of Avocado Boulevard (operates at LOS E);
- Chase Avenue west of Chase Lane (operates at LOS F);
- Chase Avenue east of Fuerte Drive (operates at LOS F); and
- State Route 94 west of Avocado Boulevard (operates at LOS E).

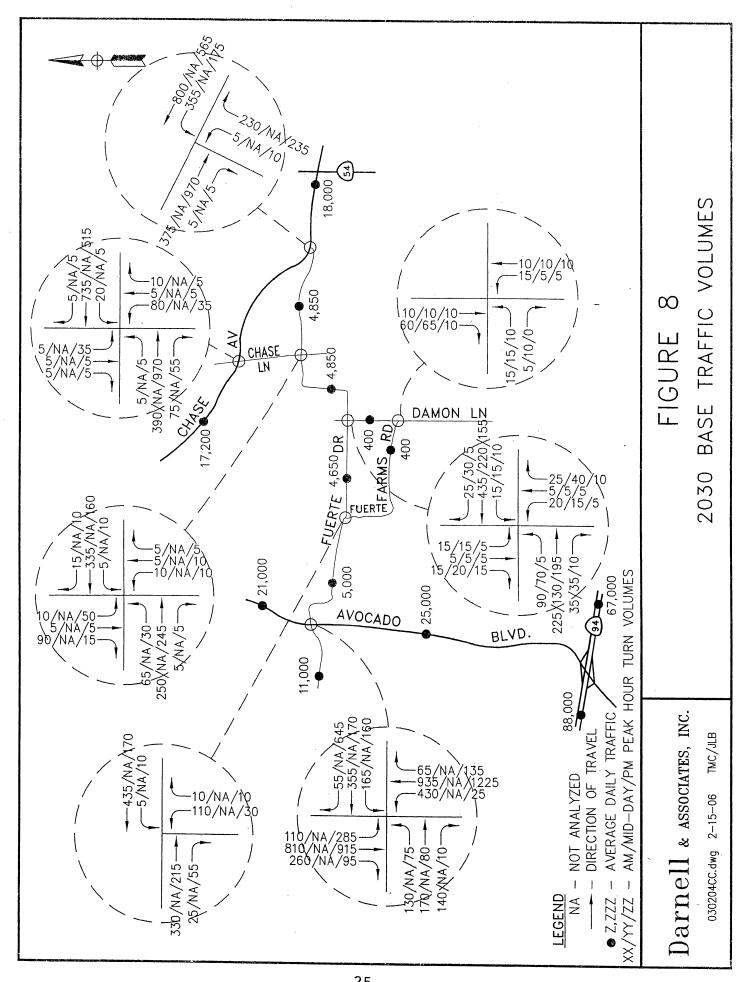
Under the PFE criteria, a significant impact would result if the project would "significantly impact congestion" on the road segments which currently operates at LOS E or F. The proposed project adds 155 or fewer two-way daily trips to these roadway segments. Since the project traffic added to these segments does not exceed the 200 ADT allowed per the County of San Diego's *Guidelines for Determining Significance* for a two-lane roadway operating at LOS E or the 200 ADT allowed per the County of San Diego's *Guidelines for Determining Significance* for a four-lane roadway operating at LOS F, it is concluded that the proposed project will not significantly impact congestion. Thus, the proposed project is not considered to have a significant future impact.

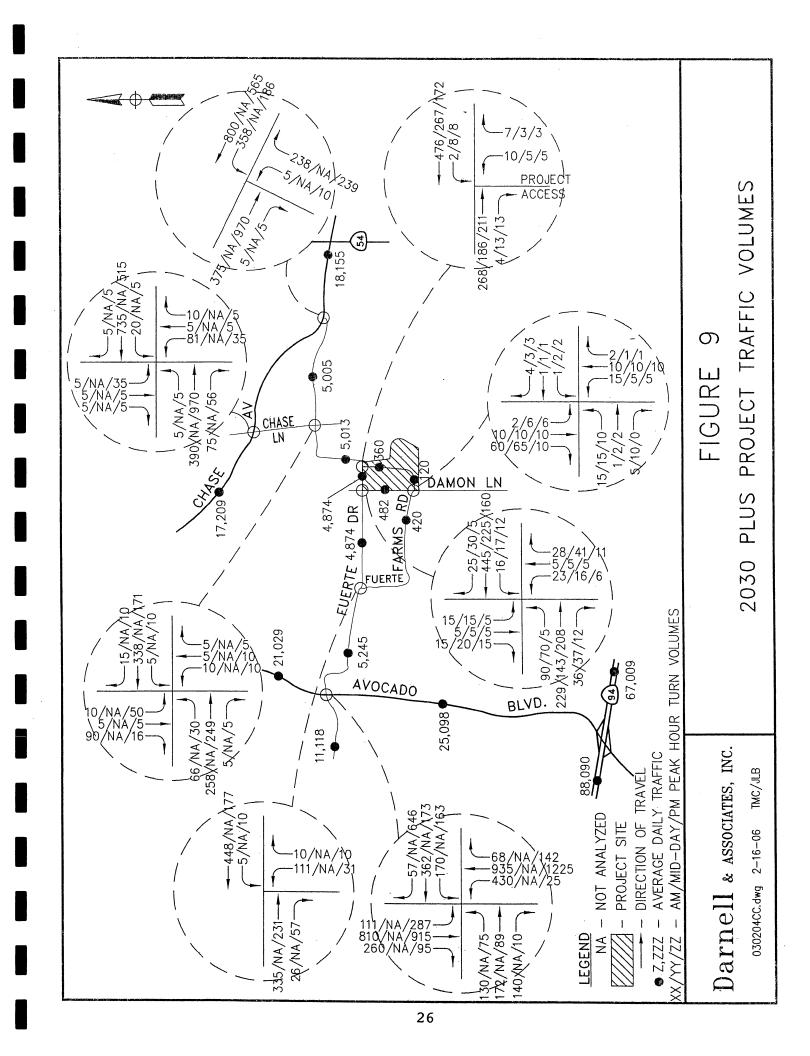
All other roadway segments analyzed operate at an acceptable LOS C or better under 2030 conditions with or without the addition of the proposed project.

Intersections

The results of the intersection analysis for the 2030 conditions are summarized in Table 9. As shown in Table 9, under 2030 condition with or without the proposed project, the following intersections operate at LOS E or F:

-Avocado Boulevard/Fuerte Drive operates at LOS E during both the AM and PM peak hours under 2030 conditions without the proposed project and continues to operate at LOS E during both the AM and PM peak hours with the addition of the proposed project. Under the PFE criteria, a significant impact would result if the project would "significantly impact congestion" on this intersection which operates at LOS E. Since the proposed project does not change the delay at this intersection, it is concluded that the proposed project will not significantly impact congestion at this intersection. Therefore, the proposed project is not considered to have a significant future impact.





T	Table 8 - 20	30 Roadway	Segment I	Jaily Le	- 2030 Roadway Segment Daily Level of Service Summary	k			
Dondwing Compat	Close	Consoity (a)	2030 Base	ase	Two-Way Project Traffic		203	2030 + Project	
Roatway Segment	Class	Capacity (a)	A.D.T.	TOS	A.D.T.	A.D.T.	TOS	Significant	Impact
Avocado Boulevard									
-North of Fuerte Drive	4M	33,400	21,000	В	29	21,029	В	N/A	None
-South of Fuerte Drive	4M	33,400	25,000	၁	86	25,098	ပ	N/A	None
Fuerte Drive									
-West of Avocado Boulevard	CC	10,900	11,000	B	118	11,118	된	N ₀	None
-Avocado Boulevard to Fuerte Farms Road	ГС	10,900	5,000	C	245	5,245	ပ	N/A	None
-Fuerte Farms Road to Damon Lane	TC	10,900	4,650	C	224	4,874	C		
-Damon Lane to Project Access	IC	10,900	4,650	C	224	4,874	C	N/A	None
-Project Access to Chase Lane	TC	10,900	4,850	ပ	163	5,013	C	N/A	None
-Chase Lane to Chase Avenue	CC	10,900	4,850	C	155	5,005	C	N/A	None
Fuerte Farms Road ^(c)									
-Fuerte Drive to Damon Lane	RC	4,500	400	< C	20	420	<c< td=""><td>N/A</td><td>None</td></c<>	N/A	None
Damon Lane ^(c)									
-South of Fuerte Drive	RS	1,500	400	< C	82	482	<c< td=""><td>N/A</td><td>None</td></c<>	N/A	None
Chase Avenue									
-West of Chase Lane	4M	33,400	17,200	Ħ	6	17,209	Œ	N _o	None
- East of Fuerte Drive	4M	33,400	18,000	F	155	18,155	F	No	None
State Route 94									
-West of Avocado Boulevard	4F	(q)	88,000	Ħ	06	88,090	Ħ	N _o	None
-East of Avocado Boulevard	4F	(b)	67,000	C	6	62,009	၁	N/A	None
(a) Canacity is based on the unner limit of LOS D ner the County of San Diego Level of Service Thresholds	he County of S	an Diego Level of S	ervice Thresh	olds					

(a) Capacity is based on the upper limit of LOS D per the County of San Diego Level of Service Thresholds

(b) The levels of service for State Route 94 were determined based on the Caltrans District 11 procedures. See Appendix for the calculation worksheets.

Significance is based on the County of San Diego's Guidelines for Determining Significance

N/A = Not Applicable because segment operates at LOS D or better; LOS = Level of Service; 4F = 4-Lane Freeway; 4M = 4-Lane Major Road; LC = Light Collector; RS = Residential Street; RC = Residential Collector

⁽c) Level of Service Thresholds are not typically applied to non-circulation element roads since their primary purpose is to serve abutting lots, not carry through traffic. The capacity shown here is the recommended upper limit of LOS C: C = the traffic volume is less than the upper limit for LOS C; C = the traffic volume is greater than the upper limit of LOS C.

			Impact		None		Ž	0 	-		None	A COLO		ouoN	TAGILE		Z			None	None					
			Sig.?		N/A		<u> </u>	Y / Y			N/A	VAT.		Ž	O. T		Ž	2		N/A	N/A					
			Proj. Trips		25	15	7	2	0	4	Π	0	0	11	4	1	0	0	0	1	2	9				
		PM Peak	Δ Delay		0.0	0.0	0.0	0.3	0.1	0.1	0.0	0.2	0.2	0.2	8.0	0.0	0.0	0.0	0.0	0.3	0.2	8.7				
		F	TOS		Ħ	A	A	В	В	А	Ą	В	В	В	F	Α	В	124	E	В	Α	A				
			Delay		62.2	9.7	7.7	11.1	10.5	1.7	7.8	13.2	14.0	12.8	159.3	9.8	10.8	102.3	42.8	11.8	6.8	8.7				
	_		Sig.?				<u> </u>	Z/A													N/A	W.				
٨	2030 + Project	eak	Proj. Trips		zed	15	7	2	0		Pos	3		Pag	noo		P of			sed	2	9		_		
nmar	2030 -	Mid-Day Peak	Δ Delay		Not Analyzed	0.0	0.0	0.3	0.3		Mot Anglered	r Ariany		Mot Analyzad	ı Allaıy		Mot Anglered	r Autauy		Not Analyzed	0.2	8.8		pact;		
e Sun		Mi	TOS		Ž	A	A	В	В		Ž			2	ואס		Ž			No	Ą	4	/vehicle	Jum) Im		
ervic			Delay			8.0	9.7	11.9	13.3												0.6	8.8	seconds	lative (C	1 P	, , ,
S Jo I			Sig.?		Š		V/V	N/A			V/V	V AT		× 12	U/N1		Ž	2		N/A	V/N	UAI	ured in	r Cumul	ethoung	
Leve		γ	Proj. Trips		20	5	11	9	0	6	3	0	0	3	8	0	0	_	0	1	-	9	ny meas	(Dir) o	M = W	.
ection		AM Peak	Δ Delay		0.0	0.1	0.1	0.8	0.5	0.1	0.0	0.4	0.1	0.1	0.4	0.0	0.0	2.2	0.0	6.0	0.3	8.7) in del	ıt Direct	md∙ WE	, ind.
nters		1	SOT		国	А	A	ပ	ပ	A	A	၁	В	A	၁	A	V	Ħ	D	၁	А	А	ecrease	gnifican	Xecthor	section
- 2030 Intersection Level of Service Summary			Delay		73.9	8.8	7.9	19.2	20.5	8.3	7.8	18.5	13.0	9.7	19.7	9.4	8.5	83.6	28.1	22.7	9.1	8.7	rease (L	act = Si	W.P. = 0.W	. = Inter
e 9 - 2		PM Peak	TOS		闰	A	A	В	В	⋖	Ą	В	В	В	Ţ	⋖	В	14	E	В	A	•	ay = Inc	ıce; Imp	er; thound:	lled; Int
Table 9		Μd	Delay		62.2	9.7	7.7	10.8	10.4	7.6	7.8	13.0	13.8	12.6	151.3	8.6	10.8	102.3	42.8	11.5	8.7		; A Del	gnifican	or bett D – Eag	-Contro
	2030 Base	Mid-Day	SOT		NA	A	A	В	В		7	<u> </u>		2	Y V		Ž			NA	⋖	,	Service	ining Si	t LOS L	ay Stop
	2030	Mid	Delay		NA	8.0	9.7	11.6	13.0		<u> </u>	ξ 		\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \	Y Y		Ž.	Y.		NA	∞ ∞.	•	evel of	Determ	erates a	All-W
		AM Peak	SOT		Э	В	٧	ပ	ပ	A	A	ပ	В	4	ပ	Ą	۷	14	Q	၁	A		LOS = 1	nes for	tion op	SWC=
		AM	Delay		73.9	8.7	7.8	18.4	20.0	8.2	7.8	18.1	12.9	9.6	19.3	9.4	8.5	81.4	28.1	21.8	8.8	•	ehicle;]	Guideli	intersec	rolled; A
		Crit.	Move		Int.	EB	WB	NB	SB	EB	WB	NB	SB	WBL	NB	EB	WB	NB	SB	NB	EB	WB	ay per v	Diego's	because	p-Contra
		Intersection		Avocado @	Fuerte Dr. (Signalized)		Fuerte @	Damon (TWSC)	(22:1)		Fuerte @	(TWSC)		Fuerte @	Chase Ave.(OWSC)		Chase Ave. @	(TWSC)		Fuerte Farms @ Fuerte Dr (OWSC)	Fuerte Farms @	Damon Ln (OWSC)	Delay = seconds of delay per vehicle; LOS = Level of Service; A Delay = Increase (Decrease) in delay measured in seconds/vehicle	Sig.? = County of San Diego's Guidelines for Determining Significance; Impact = Significant Direct (Dir) or Cumulative (Cum) Impact;	N/A = Not Applicable because intersection operates at LOS D or better;	OWSC = One-Way Stop-Controlled; ASWC = All-Way Stop-Controlled; Int. = Intersection

-Fuerte Drive/Chase Avenue operates at LOS F during the PM peak hour on the northbound approach under 2030 conditions with or without the proposed project. Under the PFE criteria, a significant impact would result if the project would "significantly impact congestion" on this intersection which operates at LOS F. The proposed project will add four (4) peak hour trips to the northbound approach. Since the addition of project traffic added to this intersection will only adds four (4) vehicles to the northbound approach, which is less than that allowed per the County of San Diego's *Guidelines for Determining Significance*, it is concluded that the proposed project will not significantly impact congestion at this intersection. Therefore, the proposed project is not considered to have a significant future impact.

-Chase Avenue/Chase Lane operates at LOS F during both peak hours on the northbound approach and operates at LOS E during the PM peak hour on the southbound approach under 2030 conditions with or without the proposed project. Under the PFE criteria, a significant impact would result if the project would "significantly impact congestion" on this intersection which has critical movements which operate at LOS E or F. Since the addition of project traffic will only add one (1) peak hour trip to the northbound approach and no trips to the southbound approach, which is less than that allowed per the County of San Diego's Guidelines for Determining Significance, it is concluded that the proposed project will not significantly impact congestion at this intersection. Therefore, the proposed project is not considered to have a significant future impact.

All other key intersections will operate at LOS C or better under 2030 conditions with or without the proposed project. The HCS worksheets for the 2030 without and with project conditions can be found in Appendix D and E, respectively.

SECTION V - PROJECT ACCESS & ON-SITE CIRCULATION

PROJECT ACCESS

The project site plan provides two (2) access points to the project site. The main access drive (Street 'A') is off Fuerte Drive approximately 445 feet east of Damon Lane. This access will provide one lane of ingress and one lane of egress and will traverse the project site and connect to the secondary project access (Street 'D'), located at the intersection of Fuerte Farms Road and Damon Lane. The secondary access (Street 'D') will provide one lane of ingress and one lane of egress. At the entrance at Fuerte Drive, Street 'A' is approximately 60 feet wide. At the entrance at Damon Lane, Street 'D' is approximately 40 feet wide.

The project accesses were analyzed utilizing the HCS, version 5.2, assuming that the Fuerte Drive/Street 'A' access would be stop-controlled on the project access (northbound) approach and the Damon Lane/Fuerte Farms Road/Street 'D' access would be stop-controlled on the project access (westbound) approach. The results of the analysis are summarized in Table 10. As shown in Table 10 the proposed project accesses will operate at LOS B or better without the addition of acceleration/deceleration lanes. A copy of the HCS worksheets for the project access analysis can be found in Appendix F.

		Ta	ble 10	- Proje	ect Acc	ess Lev	el of S	ervice :	Summ	ary			
				Existing	+ Projec	:t				2030 + 1	Project		
Intersection	Crit. Mvt.	AM	Peak	Mid-	Day	PM F	Peak	AM I	Peak	Mid-	Day	PM F	'eak
	14146.	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Fuerte Dr @	WB	7.7	A	7.6	A	7.6	A	7.8	A	7.7	Α	7.7	A
Street 'A' (OWSC)	NB	12.6	В	10.8	В	10.1	В	13.4	В	11.1	В	10.7	В
Fuerte Farms – Street 'D' @	ЕВ	9.2	A	9.0	A	9.1	A	9.7	A	9.3	A	9.4	A
Damon Lane (TWSC)	WB	8.6	A	8.6	A	8.6	A	9.0	A	9.0	A	8.9	A

OWSC = One-way stop-controlled; LOS = Level of Service,

EB = Eastbound Approach, WB = Westbound Approach, NB = Northbound Approach;

Delay is measured in seconds of delay per vehicle

To establish right-of-way control, it is recommended that a stop sign be placed at the project access points. The on-site roads are proposed to be public roads thus the project access points will be intersections of a public-to-public road. Typically, Board approval is required to install a stop sign at the intersection of a public-to-public road. Fuerte Drive is a through street, and Board direction approval for stop signs on public roads intersecting through streets has been provided. Since the Damon Lane/Fuerte Farms Road-Project Access intersection is already stop-controlled on the eastbound approach, the installation of a stop sign on the project access (westbound) approach will not change the flow of existing traffic.

The County Traffic Section in general would like to see left turn pockets installed on County maintained streets when the left turns exceed 300 turns per day. Based on the distribution illustrated in Figure 5, Section III, 72 daily project trips (i.e. 30% of 240 ADT = 72 ADT) will be making a westbound left turn movement from Fuerte Drive into the project site. Therefore, based on the County's general procedures, a westbound left turn pocket will not be required at the project access at Street 'A'. Concern has been raised about the need for a left turn pocket due to the proximity of the school. However, the peak demand

for vehicles turning left into the project site will not correspond to the peak hour traffic associated with the school. Therefore, the addition of a left turn lane at the project access will not significantly improve the traffic conditions associated with the nearby school.

The southbound left turn volume at the Damon Lane/Fuerte Farms-Project access intersection is estimated to be 48 daily project trips (i.e. 20% of 240 ADT = 48 ADT). Therefore, based on the County's general procedures, a southbound left turn pocket will not be required at the Damon Lane/Fuerte Farms-Project access intersection. It should be noted that even if 100% of the project traffic were to utilize the Damon Lane/Fuerte Farms-Project access intersection, the daily southbound left turn volume would be 240 ADT, which is still less than the 300 left turns per day outlined in the County's general procedures. Thus, even if 100% or the project traffic were to utilize the Damon Lane/Fuerte Farms-Project access intersection, a southbound left turn lane would not be required.

Per the County's request, D&A evaluated the need for a westbound left turn lane at the Fuerte Drive/Damon Lane intersection. The existing traffic counts found that there are 136 southbound daily trips on Damon Lane between Fuerte Drive and Fuerte Farms Road. Of these 136 trips, approximately 34%, or 46 daily trips are currently turning left from westbound Fuerte Drive. It is estimated that this volume of westbound left turns will increase to around 70 daily turns by the year 2030. If the 30% of the project traffic (72 ADT inbound) that is entering the project site from the east of Fuerte Drive were to utilize the Fuerte Drive/Damon Lane intersection to enter the project site, the 2030 westbound left turn volume demand at the Fuerte Drive/Damon Lane would be 142 ADT. The County generally does not require that a left turn pocket be installed until either the daily left turn volume exceeds 300 vehicles and/or there is a LOS or safety concern. As was discussed in Section IV, all approaches at the Fuerte Drive/Damon Lane intersection will operate at LOS C or better without the addition of a westbound left turn lane. Therefore, the installation of a westbound left turn lane at the Fuerte Drive/Damon Lane intersection is not required.

DRIVEWAY SPACING

Per the request of the County, D&A measured the distances between the project's proposed access on Fuerte Drive to the neighboring driveways and Damon Lane along Fuerte Drive. The field investigations found that there is an existing driveway located on the north side of Fuerte Drive approximately 91 feet east of Damon Lane. There is a second driveway on the north side of Fuerte Drive approximately 353 feet east of Damon Lane (262 feet east of the first driveway). The proposed project access at Street 'A' is located on the south side of Fuerte Drive approximately 445 feet east of Damon Lane or 92 feet east of the second driveway. A third driveway is located on the north side of Fuerte Drive approximately 573 feet east of Damon Lane or 128 east of the proposed project access at Street 'A'.

The County of San Diego requires a minimum intersection spacing of 300 feet along Circulation Element Roads. Thus, the proposed project driveway satisfies the County's spacing requirements between the nearest intersection with Damon Lane. However, the spacing between the driveways along Fuerte Drive does not comply with the County's spacing requirements. County staff has advised the project's Civil Engineer that the spacing between the proposed project entrance and the driveways on the north side of Fuerte Drive is not an issue, and that the project conditions will be written in a way that does not preclude the proposed project entrance from being located as shown on the Tentative Map. The developer will be required to file for a design exception for the minimum separation distance between the driveways as part of the project.

ON-SITE CIRCULATION

The proposed on-site circulation for Fuerte Ranch provides one main north-south access road (Street 'A') which traverses south from Fuerte Drive to the southwestern most dwelling unit at which point it will terminate in a cul-de-sac. An additional cul-de-sac road, Street 'B' (located 260 feet south of Fuerte Drive) and an east-west connector road, Street 'C', (located 870 feet south of Fuerte Drive) branch off of Street 'A' (the main access road). Street 'C' further branches off into a north-south horseshoe configuration to provide access to the lots at the southeastern corner of the project site. Both ends of the horseshoe end in cul-de-sacs.

The County of San Diego has requested that we assess the need for the main project access roads (Street 'A' and Street 'D') to be classified as Residential Collectors (capacity of 4,500 ADT) and whether the roads would be used as a cut through for traffic to avoid the school zone on Fuerte Drive. If the roadway was used as a cut-through to avoid school traffic, vehicles would have to travel on a winding curving roadway that has a lower speed limit than Fuerte Drive, several stop controlled intersections, and the travel time would be greater. School traffic would only cause delays during short periods of time and it is more likely that vehicles would alter their travel time through this area then to use the project roadway as a cut through route. Further, if people wished to divert from Fuerte Drive to avoid the school, the most likely would already be using Damon Lane to get to Fuerte Farms Road to bypass the school. The existing travel patterns do not indicated that this is occurring. It should also be noted that if 100% of the project traffic and all the traffic that currently utilizes Damon Lane were to travel on the project drive, the traffic volume would still be less than 1,500 ADT, the capacity of a Residential Road. Thus, the main project access could adequately accommodate the project traffic and any potential cut-through traffic as a Residential Road.

The developer has coordinated directly with the County of San Diego Land Development section, and the County has agreed that the on-site streets are public roads to be constructed as circulation element residential streets with 56 feet of right-or-way. The main access roads will be designed to provide 40 feet of pavement. All project roadways meet the Public Road County of San Diego's design guidelines for Residential roadways.

SIGHT DISTANCE

D&A conducted field investigations to evaluate the adequacy of sight distance at the project access. Based on the County Public Road Standards, there should be 10 feet (10') of sight distance for every 1 mile per hour (mph) based on the higher of the design speed or prevailing speeds. Speed surveys provided by the County Traffic Engineering department show that the prevailing (85th percentile) speed on Fuerte Drive is 43.2 mph (a copy of the speed survey provided by the County is provided in Appendix H). The design speed for Fuerte Drive is 45 mph. Since the design speed of Fuerte Drive is higher than the prevailing speeds, the design speed governs the corner sight distance requirements. Based on the design speed of 45 mph, a minimum of 450 feet of sight distance will be required.

At a point 15 feet back from the edge line on Fuerte Drive, there is approximately 139 feet of sight distance looking to the east of the project access and approximately 116 feet looking to the west of the project access. The sight distance is obstructed by the existing fence line and shrubbery along the project frontage on Fuerte Drive. These obstructions will be removed with the development of the proposed project.

Further, at a point 10 feet back from the edge line on Fuerte Drive, there is approximately 505 feet of sight distance looking to the east of the project access and approximately 463 feet looking to the west of the project access. Looking at the project access from the west on Fuerte Drive (eastbound traffic) there

is approximately 475 feet of sight distance while there is approximately 500 feet of sight distance looking from the east on Fuerte Drive (westbound traffic). Therefore, sight distance at the project access will be adequate. Once the project site is graded, the project Civil Engineer will need to certify that the appropriate clear zones and a minimum of 450 feet of sight distance are provided.

Per the request of the County, D&A also evaluated the adequacy of sight distance at the Fuerte Drive/Damon Lane intersection. Field investigations found that there is approximately 373 feet of sight distance looking at Fuerte Drive to the west of Damon Lane and approximately 365 feet of sight distance looking at Fuerte Drive to the east of Damon Lane. The sight distance looking to the east of Damon Lane can be improved to the required 450 feet by removing the trees and shrubs along the project frontages, which are already planned to be removed as part of the development of the project. The sight distance looking to the west of Damon Lane was obstructed by the vehicles that were parking at the southwest corner of Damon Lane. If the parking along the south side of Fuerte Drive for approximately 240 feet west of Damon Lane is restricted and the County prohibits parking within the public right-of-way, the minimum 450 feet of sight distance should be able to be satisfied. Once the project site is graded, the project Civil Engineer will need to certify that the appropriate clear zones and a minimum of 450 feet of sight distance are provided. Since the proposed project will add traffic to Damon Lane, the developer will submit a request to the Traffic Advisory Committee (TAC) to restrict parking along the south side of Fuerte Drive for approximately 240 feet west of Damon Lane.

Looking at Damon Lane from the west on Fuerte Drive (eastbound traffic), there is approximately 490 feet of sight distance while there is over 550 feet of sight distance looking from the east on Fuerte Drive (westbound traffic). Therefore, sight distance looking at Damon Lane is in compliance with County requirements.

Photographs illustrating the existing sight distance at the project access and at Damon Lane are provided in Appendix G.

SECTION VI - CONSTRUCTION TRAFFIC

The final earthwork for the site has not been finalized, but it is anticipated that the site will be balanced between import and export. As a worst case scenario, we assumed that approximately 10,000 cubic yards of import material will be required during the grading operation for the project. Assuming a truck load capacity of 12 cubic yards per truck, approximately 834 truck loads or 1,667 two-way truck trips will be required to import the 10,000 cubic yards of material (i.e. 10,000 cubic yards X 1 truck Load/12 cubic yards X 2 trips/truck load = 1,667 truck trips). The grading operation is estimated to take 2 to 3 months. Assuming there is five working days per week and four weeks per month, there will be approximately 20 working days per month. If the grading operation takes place over 2 months there will be a total of 40 working days. If the truck loads are distributed evenly throughout the 2 month duration, there will be approximately 42 two-way truck trips per day (i.e. 1,667 truck trips/40 working days = 42 truck trips/day).

The import material will mostly likely come from the east county, along Jamacha Road to Chase Avenue and down to Fuerte Drive to the project. As was discussed in Section III, the proposed project is estimated to generate 480 average daily trips with 40% of the trips, or 192 daily trips, being assigned to the east along Fuerte Drive to Chase Avenue. This is more traffic than the 42 daily trips that will be added during the grading operation of the project site. Therefore, the grading operation will not create any additional traffic impacts over those associated with the proposed project itself.

SECTION VII - COMMUNITY CONCERNS/ISSUES

VALLE DE ORO COMMUNITY PLANNING GROUP

Review of the November 18, 2003 minutes from the Valle De Oro Community Planning Group (VDOCPG) found that the planning group is concerned that the proposed project will significantly increase traffic and create adverse impacts to the area. The following summarizes the VDOCPG concerns related to traffic and D&A's responses to those concerns.

VDOCPG Concern 1:

"The proposed project allowing a 300% increase in density would result in the addition of over 460 new trips on Fuerte Drive and surrounding roads. Our experience and public testimony indicate that such an increase would create significant adverse impacts on Fuerte Drive west to I-8 and east to the Chase/Jamacha intersection."

D&A Response 1:

As was discussed in Section IV of the traffic study, Fuerte Drive between Avocado Boulevard and Chase Avenue was found to operate at an acceptable level of service C or better with or without the addition of the proposed project. The proposed project was not found to have a significant impact on Fuerte Drive.

Fuerte Drive west of Avocado Boulevard and Chase Avenue east of Fuerte Road were found to operate at LOS E or worse under 2030 conditions with or without the proposed project.

As was illustrated in Figure 5 located in Section III of this report, the proposed project is estimated to add 11 two-way AM peak hour trips (3 eastbound, 8 westbound), and 14 two-way PM peak hour trip (10 eastbound, 4 westbound) to Fuerte Drive west of Avocado Boulevard. If it is assumed that all of this traffic will be entering onto Interstate 8 via one ramp at Fuerte Drive, there will be approximately 1 vehicle every 7.5 minutes during the AM peak hour and there will be approximately 1 vehicle every 15 minutes during the PM peak hour added to the ramp volumes. This volume of traffic will not be enough to create a significant direct impact.

Figure 5 (located in Section III), also shows that the proposed project is estimated to assign 14 two-way AM peak hour trips (10 eastbound, 4 westbound) and 18 two-way PM peak hour trips (5 eastbound, 13 westbound) to Chase Avenue east of Fuerte Drive. If it is assumed that all of this traffic will utilize the Chase Avenue/Jamacha Road intersection, the proposed project would add approximately 1 vehicle to through the intersection every 4.3 minutes during the AM peak hour and every 3.3 minutes during the PM peak hour. This volume of traffic will not be enough to create a significant direct impact.

VDOCPG Concern 2A:

"Traffic conditions around the adjacent Fuerte Elementary school are chaotic during morning and afternoon drop-off/pick-up times."

D&A Response 2A:

The analysis of the Fuerte Drive/Damon Lane intersection provided in Section IV showed that the intersection operated at an acceptable level of service during both the morning drop-off and midday pick-up time frames associated with the Fuerte Elementary School. D&A also conducted field observations to observe the traffic conditions around the Fuerte Elementary school during the morning and afternoon drop-off/pick-up times. The field observations found the following conditions to exist:

AM Drop-Off (7:25 to 8:25 AM) - Drivers traveling eastbound park on the south side of Fuerte Drive in front of the school, they drop-off the passengers, then either (1) continue traveling eastbound; (2) make a U-turn mid-block in front of the school, or make a left turn onto Marcia Lane to travel around Vernette Court and Vernette Drive to head back to the west on Fuerte Drive. D&A did observe that some vehicles temporarily double-parked along Fuerte Drive. Other drivers traveling eastbound on Fuerte Drive turn right into the school parking lot.

Vehicles traveling westbound on Fuerte Drive were observed to (1) park along the north side of Fuerte Drive in front of the school to drop-off the passengers, (2) turn left into the school parking lot; (3) making a mid-block u-turn in front of the school and then park their vehicle on the south side of Fuerte Drive to drop-off passengers then either travel back to the east on Fuerte Drive or they make another mid-block u-turn to continue westbound on Fuerte Drive.

PM Pick-Up - (1:25 to 2:25 PM) - Vehicles were observed to park along both sides of Fuerte Drive, with some vehicles being double parked, to wait for school to get out. Some vehicles were observed backing into the school driveway such that could park diagonally in front of the school parking lot. Vehicles queued up at the school parking lot entrance which forced other drivers to utilize the center two-way left turn lane on Fuerte Drive to get around. As with the AM peak hour, vehicles were making u-turns at the Fuerte Drive/Damon Lane, making mid-block u-turns, and using Marcia Lane to travel back around Vernette Court and Vernette Drive to continue westbound on Fuerte Drive.

Based on the above observations, D&A agrees that the conditions surrounding the Fuerte Elementary School could become chaotic at times. However, the condition only exists for approximately 30 minutes during the morning and 30 minutes during the afternoon. In addition, a review of the collision history along Fuerte Drive found that there was only one (1) collision reported since January 1999. The collision occurred on Saturday, June 26, 1999 when school was not in operation. (A copy of the collision report is provided in Appendix H.)

The "chaotic" conditions surrounding the Fuerte Elementary School will exist with or without the development of the proposed project. The operation issues/concerns on Fuerte Drive have been brought to the attention of the County Traffic Operations staff and the County staff is currently working with the Fuerte Drive Residential Traffic Committee to address their concerns.

VDOCPG Concern 2B

"The Fuerte/Avocado intersection has far more collisions than any other intersection along Avocado Boulevard."

D&A Response 2B:

D&A obtained the collision history at the Fuerte Drive/Avocado Boulevard intersection and found that there were four (4) reported collisions in 1999, four (4) reported collisions in 2000, five (5) reported collisions in 2001, no reported collisions in 2002, and only one (1) reported collision in 2003. This trend shows that the number of collisions at the Fuerte Drive/Avocado Boulevard intersection have declined since 2001. A copy of the collision report is provided in Appendix H.

VDOCPG Concern 2C:

"Eastbound traffic on Fuerte backs up from Avocado to Calavo and from Grossmont Blvd. to the I-8 ramps and down the ramps to the point that up to three or four signal cycles are required to pass through the Fuerte/I-8 ramp signal (Level of Service "F"). Westbound Fuerte traffic backs up from the I-8 entry ramp to El Granito Avenue. Similar problems are reported at the Chase/Jamacha intersection."

D&A Response 2C:

As was discussed in the response the Concern 1, the Fuerte Drive/I-8 ramps and the Chase Avenue/Jamacha Road intersections were not analyzed, however, the project is estimated to add one (1) vehicle every 3.3 to 15 minutes to these intersections (see Response 1 for specific volumes). This increase in traffic will not be noticeable to the average driver.

VDOCPG Concern 3:

"Since all traffic related to this project will have to use Fuerte Drive and Fuerte Drive and its major intersections are over stressed under existing conditions, a 300% increase in density is in appropriate for this property."

D&A Response 3:

It is not known where the author of this comment got his/her information, however, as was illustrated in Sections II and IV of this report, the Fuerte Drive/Avocado Boulevard and Fuerte Drive/Damon Lane intersections operate at LOS D or better under existing conditions. Further Fuerte Drive east of Avocado Boulevard was found to operate at LOS B under existing conditions. Thus the existing traffic count information and analysis did not find Fuerte Drive and its major intersections in the vicinity of the proposed project to be over stressed.

COMMUNITY COMMENTS

Tim Carpenter Letter:

"This developer is clearly attempting to maximize profits with total disregard to the character and safety of the surrounding Mt. Helix community. Equally important is the project ingress and egress of 406+ car trips per day on Fuerte Drive (based on 46 dual income homes), directly next to an elementary school, with blind approaches in either direction is nothing short of an accident on its way to happen."

D&A Response to Mr. Carpenter:

As was discussed in Section V, D&A conducted field investigations to assess the adequacy of sight distance at the proposed project driveway along Fuerte Drive. The field investigations found that at a point 10 feet back from the edge line on Fuerte Drive, there is approximately 505 feet of sight distance looking to the east of the project access and approximately 463 feet looking to the west of the project access. Looking at the project access from the west on Fuerte Drive (eastbound traffic) there is approximately 475 feet of sight distance while there is approximately 500 feet of sight distance looking from the east on Fuerte Drive (westbound traffic). The County requires a minimum corner sight distance on one foot (1') for every mile per hour. The design speed for Fuerte Drive in front of the project access is 45 miles per hour, yielding minimum sight distance requirement of 450 feet. Therefore, the sight distance at the proposed project access was determined to be adequate.

Further, with the development of the proposed project the existing fence line and shrubbery on the south side of Fuerte Drive along the project frontage will be removed, thus providing even more sight distance than that what was measured in the field.

From Letter from mHANDS Concerns:

"As a supporter of mHANDS (Mt. Helix Residents Developing Safer Streets) I am concerned that any changes and/or amendments in relation to increased density for this parcel in the 2020 plan would greatly impact our already existing traffic challenges throughout the Mt. Helix rural area."

D&A Response to mHands:

As was illustrated in Section IV of the traffic study, the proposed project will not significantly impact any of the adjacent intersections. In addition, the proposed project will not significantly impact Fuerte Drive in the immediate vicinity of the project. The following section, Section VIII summarizes the measures the developer will make to mitigate its cumulative impacts.

SECTION VIII - MITIGATION

DIRECT IMPACTS

Roadway Segments

• The project does not have a significant direct impact on any of the analyzed roadway segments.

Intersections

The project does not have a significant direct impact on any of the analyzed intersections.

CUMULATIVE IMPACTS

Due to the project's potential to send at least 1 trip on a County circulation element roadway that either currently operates or is projected to operate at LOS E or F, the project will need to pay the County's Transportation Impact Fee (TIF) to mitigate cumulative impacts. As seen below in Table 11, based on the fees for the Valle De Oro (last updated March 7, 2006) the TIF for the proposed project will be \$276,560.00. It should be noted that the actual fee is subject to change as the TIF Ordinance is updated annually and the fees are adjusted to reflect the engineering cost index. The developer has agreed to pay the TIF to mitigate the project's potential cumulative impacts to the County roadways.

Table 11 -	Transportation Impa	ict Fee (TIF) Summary	•
Land Use	Number of Units	Cost per Unit	Total Cost
Estate Residential	40	\$6,914	\$276,560

Total Cost = Cost per Unit × Number of Units.

Cost per unit based on fees for Valle De Oro, last updated March 7, 2006

Note: The actual fee is subject to change as the TIF Ordinance is updated annually and the fees are adjusted to reflect the engineering cost index

FUTURE IMPACTS

Roadway Segments

• The project does not have a significant future impact on any of the analyzed roadway segments.

Intersections

• The project does not have a significant future impact on any of the analyzed intersections.

PROJECT MITIGATION

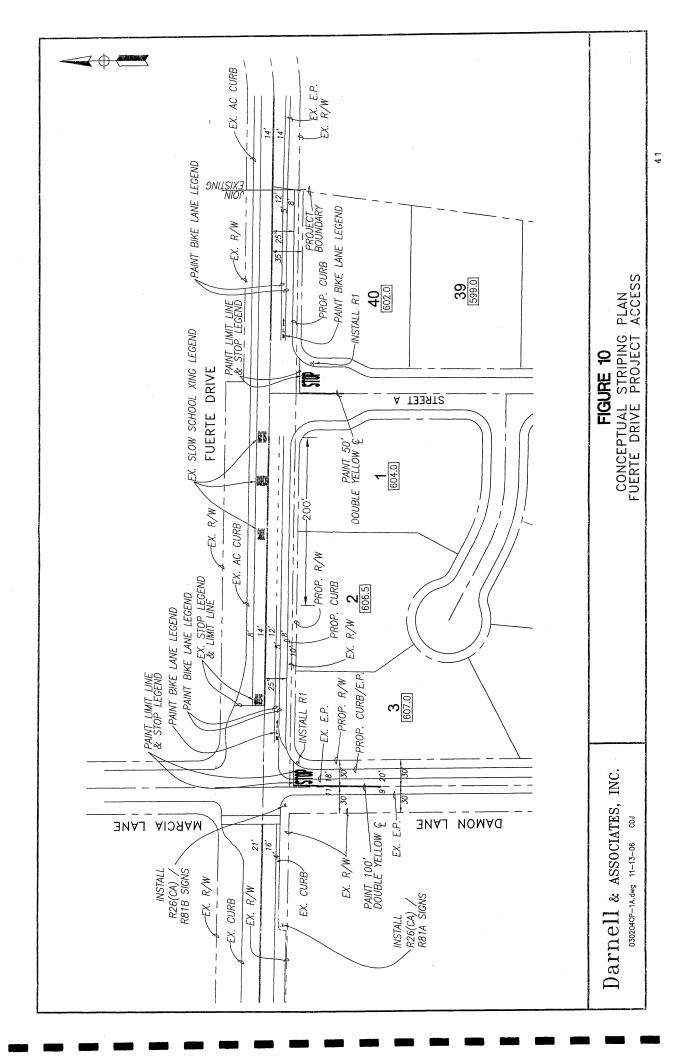
Roadway Segments

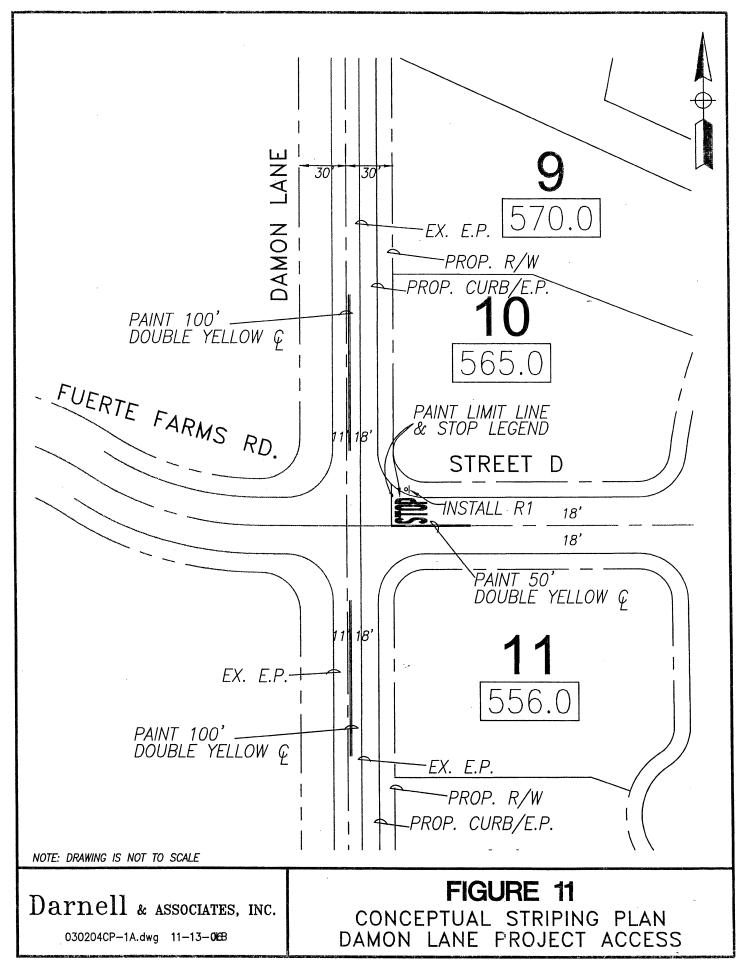
• As part of the County's center-line ordinance, the proposed project will be responsible for frontage improvements along Fuerte Drive. To comply with the County's ordinance, the developer proposes to widen the pavement width of Fuerte Drive along the project frontage by five feet (5') to make accommodations for a future bike lane. Figure 10 provides illustrations of the proposed improvements on Fuerte Drive. As shown in Figure 10, with the proposed widening the cross section

- of Fuerte Drive along the project's frontage will provide one (1) fourteen foot (14') westbound travel lane, one (1) twelve foot eastbound travel lane, eight foot (8') shoulders on both sides of the roadway, and a five foot (5') bike lane on the south side of the roadway.
- The initial conditions established by the County requested that the proposed project improve or agree to improve and provide security for Damon Lane from Fuerte Drive to Fuerte Farms Road, to Public Residential Collector Road Standards to a one-half graded width of thirty feet (30') with twenty feet (20') of asphaltic concrete pavement from center line. The developer is proposing to make the required frontage improvements on Damon Lane. Figure 11 provides illustrations of the proposed improvements on Damon Lane.

Intersections

- To establish right-of-way control, it is recommended that a stop-sign be placed at both project access points off Fuerte Drive and Damon Lane. As previously noted, the on-site roads are proposed to be public roads thus the project access points will be intersections of a public to public road. Typically Board approval is required to install a stop sign at the intersection of a public to public road. Fuerte Drive is a through street, and Board direction approval for stop signs on public roads intersecting through streets has been provided. Since the Damon Lane/Fuerte Farms Road-Project Access intersection is already stop-controlled on the eastbound approach, the installation of a stop sign on the project access (westbound) approach will not change the flow of existing traffic.
- Once grading on the project site is complete, the project Civil Engineer will need to certify that a minimum of 450 feet of sight distance is provided at its project access on Fuerte Drive.
- To improve the sight distance at the Fuerte Drive/Damon Lane intersection, the County will need to restrict parking along the south side of Fuerte Drive for approximately 240 feet west of Damon Lane and prohibit parking within the public right-of-way. Once the project site is graded, the project Civil Engineer will need to certify that the appropriate clear zones and a minimum of 450 feet of sight distance are provided. Since the proposed project will add traffic to Damon Lane, the developer will submit a request to the Traffic Advisory Committee (TAC) to restrict parking along the south side of Fuerte Drive for approximately 240 feet west of Damon Lane.





SECTION IX - SUMMARY OF FINDINGS AND CONCLUSIONS

- The developer proposes to construct 40 single-family estate homes (Fuerte Ranch Estates) on a 26.87 acre site located at the southeast corner of Fuerte Drive and Damon Lane in the County of San Diego.
- The project site's current zoning is A72, an agricultural use with a minimum lot size of four acres to yield a potential of six (6) lots (i.e. 26.87 acres ÷ 1 lot per 4 acres = 6.7 lots). Since the project proposes to construct 34 more lots than the site is currently zoned for a re-zone is required.
- The proposed Fuerte Ranch Estates is estimated to generate 480 average daily trips, 38 AM peak hour trips, and 48 PM peak hour trips.
- The proposed Fuerte Ranch Estates does not have a significant direct impact or future impact on any roadway segment or intersection analyzed.
- To account for any cumulative impacts on County roads, the project intends on paying the County's TIF in the amount of \$276,560. It should be noted that the actual fee is subject to change as the TIF Ordinance is updated annually and the fees are adjusted to reflect the engineering cost index.
- As part of the County's center-line ordinance, the proposed project will be responsible for frontage improvements along Fuerte Drive. To comply with the County's ordinance, the developer proposes to widen the pavement width of Fuerte Drive along the project frontage by five feet (5') to make accommodations for a future bike lane. With the proposed widening, the cross section of Fuerte Drive along the project's frontage will provide one (1) fourteen foot (14') westbound travel lane, one (1) twelve foot eastbound travel lane, eight foot (8') shoulders on both sides of the roadway, and a five foot (5') bike lane on the south side of the roadway.
- The developer intends to widen Damon Lane from Fuerte Drive to Fuerte Farms Road, to Public Residential Collector Road Standards to a one-half graded width of thirty feet (30') with twenty feet (20') of asphaltic concrete pavement from center line. The developer is proposing to make the required frontage improvements on Damon Lane.
- To establish right-of-way control, it is recommended that a stop-sign be placed at both project accesses off Fuerte Drive and Damon Lane. The on-site roads are proposed to be public roads thus the project access points will be intersections of a public to public road. Typically Board approval is required to install a stop sign at the intersection of a public to public road. Fuerte Drive is a through street, and Board direction approval for stop signs on public roads intersecting through streets has been provided. Since the Damon Lane/Fuerte Farms Road-Project Access intersection is already stop-controlled on the eastbound approach, the installation of a stop sign on the project access (westbound) approach will not change the flow of existing traffic.
- To improve the sight distance at the Fuerte Drive/Damon Lane intersection, the developer will submit a request to the Traffic Advisory Committee (TAC) to restrict parking along the south side of Fuerte Drive for approximately 240 feet west of Damon Lane
- Once grading on the project site is complete, the project Civil Engineer will need to certify that a minimum of 450 feet of sight distance is provided at the project access on Fuerte Drive.

APPENDIX A

- ➤ AM/PM Peak Hour Traffic Counts
 - ➤24-Hour Machine Counts
 - ➤ SANDAG Trip Generation Rates
- ➤ County of San Diego Level of Service Thresholds
- ➤ County of San Diego Guidelines for Determining Significance
 - ➤ Excerpts from the Public Facility Element
 - ➤ Forecast Volumes
 - ➤ County TIF Fee for the Valle De Oro Region

and the second of the second o

and the second control of the second second

potential in the sale for a long display of the contract

ng na militang at militang kang palaman at militang at militang at militang at militang at militang at militang Manamatang at militang at militang militang at militang militang at militang militang militang at militang

and the service of th

AM/PM Peak Hour Traffic Counts

per trible e gest fest tribe.

N-S STREET: Avocado Blvd

DATE: 1/26/2006

LOCATION: City of El Cajon

E-W STREET: Fuerte Dr

DAY: THURSDAY

PROJECT# 06-4033-001

	N	ORTHBO	UND	S	ОИТНВО	UND	: [ASTBOL	JND	V	VESTBOL	JND	
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 1	ER 1	WL 1	WT 1	WR 1	TOTAL
6:00 AM 6:15 AM 6:30 AM 6:45 AM 7:00 AM 7:15 AM 7:30 AM 7:45 AM 8:00 AM 8:15 AM 9:00 AM 9:15 AM 9:30 AM 9:15 AM 10:00 AM 10:15 AM 10:30 AM	90 84 92 67 90 67 45 56	87 150 170 199 209 145 163 133	10 7 8 26 6 12 11 13	9 5 12 49 6 2 6 5	126 132 153 193 153 139 140 156	26 41 50 42 43 25 19 37	5 15 26 25 20 30 17 13	13 12 22 59 17 8 23 7	21 24 23 21 39 35 44 39	14 17 16 41 49 16 20 13	37 49 42 67 72 33 16 18	12 4 4 9 18 10 5 2	450 540 618 798 722 522 509 492
11:15 AM 11:30 AM 11:45 AM TOTAL VOLUMES =	NL 591	NT 1256	NR 93	SL 94	ST 1192	SR 283	EL 151	ET 161	ER 246	WL 186	WT 334	WR 64	TOTAL 4651
AM Peal	k Hr Be	gins at:	715	AM		· .							
PEAK VOLUMES =	333	728	47	72	631	176	86	110	107	123	230	35	2678
PEAK HR. FACTOR:		0.908			0.774			0.721			0.698		0.839
CONTROL:	Signaliz	ed						·					

N-S STREET: Avocado Blvd

DATE: 1/26/2006

LOCATION: City of El Cajon

E-W STREET: Fuerte Dr

DAY: THURSDAY

PROJECT#

TOTAL NL NT NR SL ST SR EL ET ER WL WT WR TOTAL		NOI	RTHBOU	ND	SOL	JTHBOUI	ND .	EAS	STBOUN	D	WE	STBOU	ND	
1:15 PM 1:30 PM 1:45 PM 2:00 PM 2:15 PM 2:30 PM 2:45 PM 3:00 PM 3:45 PM 3:30 PM 3:45 PM 4:00 PM 5	LANES:													ŢOTAL
1:30 PM 1:45 PM 2:00 PM 2:15 PM 2:30 PM 2:45 PM 3:00 PM 3:15 PM 3:30 PM 3:45 PM 4:00 PM 5 217 20 45 193 9 16 15 1 33 44 97 695 4:00 PM 5 196 35 42 190 12 15 12 2 24 26 96 655 4:15 PM 5 204 38 35 178 7 14 12 0 31 24 121 669 4:30 PM 5 204 38 35 178 7 14 12 0 31 24 121 669 4:45 PM 1 241 18 50 153 21 17 11 2 31 35 115 695 4:45 PM 1 241 18 50 153 21 17 11 2 31 35 115 695 5:00 PM 1 244 25 47 208 16 11 15 3 25 22 97 714 5:15 PM 10 266 20 53 174 19 6 13 1 30 30 91 713 5:15 PM 10 266 20 53 174 19 6 13 1 30 30 91 713 5:30 PM 6 223 23 35 171 21 16 7 2 19 24 105 652 5:45 PM 4 205 17 40 179 14 15 8 0 33 27 90 632 FOTAL FOTAL FOTAL FOTAL FOLIAL	1:00 PM	· · · · · · · · · · · · · · · · · · ·												
1:45 PM 2:00 PM 2:30 PM 2:30 PM 3:00 PM 3:30 PM 3:35 PM 3:345 PM 4:00 PM 5 217 20 45 193 9 16 15 1 33 44 97 695 4:15 PM 5 196 35 42 190 12 15 12 2 24 26 96 655 4:15 PM 5 204 38 35 178 7 14 12 0 31 24 121 669 4:30 PM 5 204 38 35 178 7 14 12 0 31 24 121 669 4:30 PM 5 204 38 35 178 7 14 12 0 31 24 121 669 4:30 PM 5 204 38 35 178 7 14 12 0 31 24 121 669 5:00 PM 1 241 18 50 153 21 17 11 2 31 35 115 695 5:00 PM 1 244 25 47 208 16 11 15 3 25 22 97 714 5:15 PM 10 266 20 53 174 19 6 13 1 30 30 91 713 5:15 PM 10 266 20 53 174 19 6 13 1 30 30 91 713 5:15 PM 6 223 23 35 171 21 16 7 2 19 24 105 652 5:45 PM 4 205 17 40 179 14 15 8 0 33 27 90 632 FOTAL FOR A STAN STAN STAN STAN STAN STAN STAN ST	1:15 PM													
2:00 PM 2:15 PM 2:30 PM 2:45 PM 3:00 PM 3:15 PM 3:30 PM 3:315 PM 3:39 PM 3:45 PM 4:00 PM 5	1:30 PM													
2:15 PM 2:30 PM 2:45 PM 3:00 PM 3:15 PM 3:30 PM 3:35 PM 4:00 PM	1:45 PM													
2:30 PM 2:45 PM 3:00 PM 3:15 PM 3:30 PM 3:45 PM 4:00 PM 5	2:00 PM													
2:45 PM 3:00 PM 3:15 PM 3:33 PM 3:45 PM 4:00 PM 5 217 20 45 193 9 16 15 1 33 44 97 695 4:15 PM 5 196 35 42 190 12 15 12 2 24 26 96 655 4:15 PM 5 204 38 35 178 7 14 12 0 31 24 121 669 4:30 PM 1 241 18 50 153 21 17 11 2 31 35 115 695 4:45 PM 1 241 18 50 153 21 17 11 2 31 35 115 695 5:00 PM 1 244 25 47 208 16 11 15 3 25 22 97 714 5:00 PM 10 266 20 53 174 19 6 13 1 30 30 91 713 5:15 PM 10 266 20 53 174 19 6 13 1 30 30 91 713 5:30 PM 6 223 23 35 171 21 16 7 2 19 24 105 652 5:45 PM 4 205 17 40 179 14 15 8 0 33 27 90 632 FOTAL F	2:15 PM													
3:00 PM 3:15 PM 3:30 PM 3:35 PM 4:00 PM 5 217 20 45 193 9 16 15 1 33 44 97 695 4:15 PM 5 196 35 42 190 12 15 12 2 24 26 96 655 4:15 PM 5 204 38 35 178 7 14 12 0 31 24 121 669 4:30 PM 5 204 38 35 178 7 14 12 0 31 24 121 669 4:43 PM 1 241 18 50 153 21 17 11 2 31 35 115 695 5:45 PM 1 244 25 47 208 16 11 15 3 25 22 97 714 5:15 PM 10 266 20 53 174 19 6 13 1 30 30 91 713 5:15 PM 10 266 20 53 174 19 6 13 1 30 30 91 713 5:30 PM 6 223 23 35 171 21 16 7 2 19 24 105 652 5:45 PM 4 205 17 40 179 14 15 8 0 33 27 90 632 FOTAL OLUMES = 37 1796 196 347 1446 119 110 93 11 226 232 812 TOTA FOTAL OLUMES = 17 955 101 185 713 63 48 51 6 117 111 424 2791 PEAK WOLUMES = 17 955 101 185 713 63 48 51 6 117 111 424 2791 PEAK HR. OLUMES = 17 955 101 185 713 63 48 51 6 117 111 424 2791	2:30 PM													
3:15 PM 3:30 PM 3:45 PM 4:00 PM 5	2:45 PM					•								
3:30 PM 3:45 PM 4:00 PM 5	3:00 PM									•				
3:45 PM 4:00 PM 5														
4:00 PM														
4:00 PM					45	102	0	16	15	1	33	44	97	695
4:15 PM														655
4:30 PM													121.	669
4:45 PM 1 241 18 50 133 21 17 15 3 25 22 97 714 5:00 PM 1 244 25 47 208 16 11 15 3 25 22 97 714 5:15 PM 10 266 20 53 174 19 6 13 1 30 30 91 713 5:15 PM 6 223 23 35 171 21 16 7 2 19 24 105 652 5:45 PM 4 205 17 40 179 14 15 8 0 33 27 90 632 6:00 PM 6:15 PM 6:30 PM 6:45 PM TOTAL //OLUMES =														695
5:00 PM													97	714
5:15 PM 10 266 20 33 171 121 16 7 2 19 24 105 652 5:30 PM 6 223 23 35 171 21 16 7 2 19 24 105 652 5:45 PM 4 205 17 40 179 14 15 8 0 33 27 90 632 632 630 PM 6:45 PM FOTAL													91	713
5:30 PM 6 223 23 35 17 40 179 14 15 8 0 33 27 90 632 6:00 PM 6:15 PM 6:30 PM 6:45 PM FOTAL VOLUMES =													105	652
5:45 PM												27	90	632
6:15 PM 6:30 PM 6:45 PM FOTAL		4	205	17	40	1/9	17	13	Ŭ	•				
6:30 PM 6:45 PM FOTAL NL NT NR SL ST SR EL ET ER WL WT WR TOTAL VOLUMES = 37 1796 196 347 1446 119 110 93 11 226 232 812 5425 PM Peak Hr Begins at: 430 PM PEAK VOLUMES = 17 955 101 185 713 63 48 51 6 117 111 424 2791 PEAK HR.														
6:45 PM TOTAL NL														
PEAK VOLUMES = 17 955 101 185 713 63 48 51 6 117 111 424 2791														
TOTAL VOLUMES = NL NT NR SL SI SR EL LI LI NL NT NR	6:45 PM													T ===:
PEAK VOLUMES = 37 1796 196 347 1446 119 110 93 11 223 234 246 2791 246 2791 247	ΓΟΤΑL	NL												
PEAK VOLUMES = 17 955 101 185 713 63 48 51 6 117 111 424 2791	VOLUMES =	37	1796	196	347	1446	119	110	93	11	220	232	011	
PEAK VOLUMES = 17 955 101 185 713 63 48 51 6 117 111 424 2791		i			•			•						
VOLUMES = 17 955 101 185 713 63 48 51 6 117 111 12 12 13 14 15 15 16 17 17 17 17 17 17 17 17 17 17 17 17 17	PM Pe	ak Hr B	egins at	: 430) PM	. •								
VOLUMES = 1/ 955 101 185 713 05 10 31 0 975 0.901 0.97		1	055	101	1 105	712	63	48	51	6	117	111	424	2791
	volumes =	1/	955	101	103	, 13			-			•		
FACTOR: 0.906 0.887 0.873 31332				_		0.003	i		0.875		ĺ	0.901		0.97
	FACTOR:	1	0.906	Ó	1	0.887		1 -	0,679		1	3.53.		•

N-S STREET: Fuerte Farms Rd

DATE: 1/26/2006

LOCATION: City of El Cajon

E-W STREET: Fuerte Dr

DAY: THURSDAY

PROJECT#

		•											
	N	ORTHBO	UND	SO	ОИТНВО	UND	1	ASTBOL	IND	۷	VESTBOL	IND	
LANES:	NL 0	NT 1	NR 0	SL 0	ST 0	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
6:00 AM						1							
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	7	0	3					32	1	1	47		91
7:15 AM	3	0	1					26	2	1	- 52		8 5
7:30 AM	13	0	1					56	5	0	63		138
7:45 AM	38	0	3					117	4	1	98		261
8:00 AM	17	0	1					18	5	1	73		115
8:15 AM	7	0	1		-			16	0	1	35		60
8:30 AM	8	1	3		Ng.			24	5	0	31		72
8:45 AM	2	0	1					11	1	1	21		37
9:00 AM													
9:15 AM				4 1									
9:30 AM													
9:45 AM 10:00 AM													
10:00 AM 10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
11."5 AN													
TOTAL VOLUMES =	NL 95	NT	NR 14	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
VOLUMES =	95	1	14	0	0	0	0	300	23	6	420	0	859
·				•			•			• .			
AM Pea	k Hr Be	egins at:	715	AM				-					
DE ALC													
PEAK				1 .	_				,				
VOLUMES =	71	0	6	0	0	0	0	217	16	3	286	0	599
DEAK ND													
PEAK HR.		0.470			0.000							•	
FACTOR:		0.470	-		0.000		I	0.481		Ì.	0.730		0.574
CONTROL:	1-Ways	Stop NB											

Intersection Turning Movement

Prepared by: Southland Car Counters

N-S STREET: Fuerte Farms Rd

DATE: 1/26/2006

LOCATION: City of El Cajon

E-W STREET: Fuerte Dr

DAY: THURSDAY

PROJECT#

1:00 PM		NOI	RTHBOU	ND ,	SOL	JTHBOU	JND	. EA	STBOUN	ID :	WE	STBOU	ND	
1:15 PM 1:30 PM 1:45 PM 2:00 PM 2:15 PM 2:30 PM 2:45 PM 3:00 PM 3:15 PM 3:30 PM 3:30 PM 3:35 PM 4:00 PM 1 0 2 11 4 1 17 36 4:00 PM 6 0 2 37 9 4 35 93 4:15 PM 5 0 0 2 39 11 1 24 80 4:45 PM 5 0 0 2 31 6 1 33 78 4:45 PM 5 0 0 2 31 6 1 33 78 4:45 PM 5 0 0 2 35 7 1 20 67 5:00 PM 3 0 1 1 36 4 1 23 76 5:00 PM 3 0 1 3 36 1 38 76 5:15 PM 0 0 0 2 38 2 1 33 76 5:15 PM 0 0 0 2 38 2 1 33 81 5:45 PM 6 1 2 2 1 38 2 1 33 81 5:45 PM 6 1 2 2 1 38 2 1 38 5:	LANES:													TOTAL
1:30 PM 1:45 PM 2:00 PM 2:15 PM 2:30 PM 2:35 PM 3:30 PM 3:30 PM 3:315 PM 3:30 PM 3:45 PM 4:00 PM 1	1:00 PM													
1:45 PM 2:00 PM 2:15 PM 2:30 PM 2:35 PM 3:30 PM 3:15 PM 3:30 PM 3:45 PM 4:00 PM	1:15 PM													
2:00 PM 2:15 PM 2:30 PM 2:30 PM 3:00 PM 3:15 PM 3:30 PM 3:45 PM 4:00 PM	1:30 PM													
2:15 PM 2:30 PM 2:30 PM 3:00 PM 3:15 PM 3:30 PM 3:330 PM 3:345 PM 4:00 PM 5 0 0 2 37 9 4 35 93 4:15 PM 5 0 0 31 1 24 80 4:30 PM 5 0 0 2 31 6 1 33 78 4:45 PM 5 0 2 39 11 1 24 80 4:30 PM 5 0 0 2 31 6 1 33 78 4:45 PM 5 0 2 31 6 1 33 78 5:15 PM 0 0 2 35 7 1 20 67 5:00 PM 3 0 1 35 7 1 20 67 5:15 PM 0 0 0 2 38 2 1 33 81 5:30 PM 4 0 3 3 38 2 1 33 81 5:30 PM 4 0 3 3 38 2 1 33 81 5:45 PM 6 1 2 38 2 1 33 81 6:30 PM 6:15 PM 6:30 PM 6:45 PM PEAK VOLUMES =														
2:30 PM 2:45 PM 3:00 PM 3:15 PM 3:30 PM 3:45 PM 4:40 PM														
2:45 PM 3:00 PM 3:15 PM 3:330 PM 3:45 PM 4:00 PM	2:15 PM													
3:00 PM 3:15 PM 3:330 PM 3:345 PM 4:00 PM														
3:15 PM 3:30 PM 3:45 PM 4:00 PM														
3:30 PM 3:45 PM 4:00 PM						•					-			
3:45 PM 4:00 PM 1 0 2 4:15 PM 6 0 2 4:15 PM 6 0 2 4:30 PM 5 0 0 4:30 PM 5 0 0 4:45 PM 5 0 2 5:00 PM 3 0 1 5:00 PM 3 0 1 5:30 PM 4 0 3 5:45 PM 6 1 2 6:00 PM 6:15 PM 6:30 PM 6:45 PM TOTAL VOLUMES =														
4:00 PM														
4:00 PM			•	2					. 11	4	1	17		
4:15 PM											4	35		
4:35 PM 5 0 0 0 2 31 6 1 33 78 75:00 PM 3 0 1 30 1 35 7 1 20 67 5:15 PM 0 0 0 2 38 2 1 33 81 5:30 PM 4 0 3 3 33 9 2 15 68 68 68:15 PM 6:45 PM											1	24		
4:45 PM							•				1	33		
5:10 PM											1	20	•	
5:15 PM										4	1			
5:30 PM				2						2				
6:00 PM 6:15 PM 6:30 PM 6:30 PM 6:45 PM FOTAL NI NT NR SL ST SR EL ET ER WL WT WR TOTAL FOLUMES = 30 1 14 0 0 0 0 270 52 12 200 0 579 PM Peak Hr Begins at: 415 PM PEAK VOLUMES = 19 0 5 0 0 0 0 142 33 7 112 0 318 PEAK HR. FACTOR: 0.750 0.000 0.875 0.763 0.85				ა ე						9	2	15		68
6:15 PM 6:30 PM 6:45 PM OTAL OLUMES =		ь	1	. 2										
6:30 PM 6:45 PM OTAL OTAL OLUMES =					•									
OTAL OLUMES =														
OTAL OTAL OTAL OTAL OTAL OTAL OTAL OTAL														
OTAL /OLUMES = NL NT NR SL ST SR EL ET LIX NL NT NR NR NT NR SL ST SR EL ET LIX NL NT NR NR NT NR NR NT NR NR NR NT NR NR NT NR NR NT NR NR NT NR NR NT NR NR NR NT NR	6:45 PM				·.						1 \	NA/T	\A/D	I TOTAL
PEAK WOLUMES = 30														
PEAK VOLUMES = 19 0 5 0 0 0 0 142 33 7 112 0 318 PEAK HR. FACTOR: 0.750 0.000 0.875 0.763 0.85	OLUMES =	30	1	14	١	U	. 0	"	2, 0	-				1
PEAK WOLUMES = 19 0 5 0 0 0 0 142 33 7 112 0 318 PEAK HR. FACTOR: 0.750 0.000 0.875 0.763 0.85		ı												
PEAK VOLUMES = 19 0 5 0 0 0 0 142 33 7 112 0 318 PEAK HR. FACTOR: 0.750 0.000 0.875 0.763 0.855	PM P	eak Hr B	egins at	: 41	5 PM									
VOLUMES = 19 0 5 0 0 0 142 33 7 222 7 223											•			
PEAK HR. FACTOR: 0.750 0.000 0.875 0.763 0.85		l 10	0	5	1 0	0	0	0	142	33	7	112	0	318
FACTOR: 0.750 0.000 0.873	/ULUMES -			-										
FACTOR: 0.750 0.000 0.875	PEAK HR.				1				ሰ 87	5		0.76	3	0.85
A NA Char ND		1	0.750)	1	0.00	JU	1	0.07	J	1			<u>-</u>
		4 14/-	vCtop NI	2										
CONTROL: 1-WayStop NB	JON I KOL:	T-Mg	iyətop ivi	,										

N-S STREET: Damon Ln

DATE: 1/25/2006

LOCATION: City of El Cajon

E-W STREET: Fuerte Dr

CONTROL:

, , , , , 2 way stop

DAY: WEDNESDAY

PROJECT#

:	· ·										•		*4
	N	ORTHBO	UND	S	OUTHBO	UND		EASTBOU	JND	V	VESTBOU	JND	
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
6:00 AM	· · · · · · · · · · · · · · · · · · ·												
6:15 AM													
6:30 AM												٠,	
6:45 AM													
7:00 AM	0	0	1	3		1	2	32	0	1	49	2	91
7:15 AM	2	0	0	0		3	1	15	1	0	53	1	76
7:30 AM	1	0	1	4		3	8	29	4	2	81	2	135
7:45 AM	8	1	13	3		2	49	79	17	7	118	10	307
8:00 AM	7	0	2	4		3	6	24	3	2	33	0	84
8:15 AM	- 2	0	1	2		2 2	0	17	0	. 0	30	1	55
8:30 AM	1	0	2	1			1	17	1	0	22	2	49
8:45 AM	1.	0	1	2		0	1	10	1	0	25	0	41
9:00 AM											•		
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
OTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
OLUMES =	22	1	21	19	0	16	68	223	27	12	411	18	838
	1		I				ı			l			
AM Pea	ık Hr Be	gins at:	700	AM									
EAK													
OLUMES =	11	1	15	10	0	9	60	155	22	10	301	15	609
			j										
EAK HR.													
ACTOR:		0.307	ı		0.679			0.409			0.604		0.496
									•	-		•	

N-S STREET: Damon Ln

DATE: 1/25/2006

LOCATION: City of El Cajon

E-W STREET: Fuerte Dr

DAY: WEDNESDAY

PROJECT#

06-4033-003

	NO	RTHBO	LIND	SO	UTHBOL	JND	EA	STBOU	ND	W	ESTBOU	ND	
LANES:	NU NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
1:00 PM 1:15 PM 1:30 PM 1:45 PM 2:00 PM 2:15 PM 2:30 PM 2:45 PM 3:00 PM 3:15 PM 3:30 PM 3:45 PM	0 0 0 3 3 2 0 0 4 0		1 0 2 6 13 4 2 2 0 2 2	1 0 0 7 1 1 3 0 0	0 0 0 0 0 1 0 0 0	3 1 3 1 4 4 0 3 1 2 0	0 1 3 12 26 5 0 1 1 4 2	18 10 12 35 27 16 23 34 27 38 20 43	1 1 3 14 5 0 2 1 0 0	2 0 1 6 2 0 0 0 0 0	23 30 39 37 44 30 19 19 26 37 18 22	2 3 2 5 10 1 0 1 1 2 1 3	51 46 65 119 141 64 47 64 60 85 44 76

TOTAL VOLUMES =	NL 13	NT 0	NR 36	SL 14	ST 1	SR 23	EL 57	ET 303	ER 28	WL 12	WT 344	WR 31	TOTAL 862	
MID Pea			130	PM									,	i
PEAK VOLUMES =	8	0	25	8	1	12	46	90	22	9	150	18	389	
PEAK HR. FACTOR:		0.516			0.477	•		0.648			0.790		0.690	

CONTROL:

N-S STREET: Damon Ln

DATE: 1/25/2006

LOCATION: City of El Cajon

E-W STREET: Fuerte Dr

DAY: WEDNESDAY

PROJECT# 06-4033-003

	NO	ORTHBO	UND	S	OUTHBO	DUND		EASTBOU	JND	V	VESTBO	JND	
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
1:00 PM													
1:15 PM 1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM		*											
3:30 PM													
3:45 PM													
4:00 PM	0		2	0	0	5	0	37	1	1	26	0	72
4:15 PM	1		0	0	0	3	2	25	2	0	35	Ō	68
4:30 PM	1		2	0	0	1	0	40	2	4	19	0	69
4:45 PM	0		1	2	0	1	1	32	0	2	25	2	66
5:00 PM 5:15 PM	0 1		1	1	0	1	4	34	1	0	- 27	2	71
5:30 PM	0		1 0	0 2	0	1	0	36	0	0	21	0	60
5:45 PM	0		1	1	0 0	1	3	26	0	1	23	1	57
6:00 PM	U			1	U	0	1	21	0	0	18	1	43
6:15 PM													
6:30 PM													
6:45 PM									,				
TOTAL	NL	NT	NR	SL	ST	SR	EL			1 1 /3		14/2	
VOLUMES =	3	0	8	6	0	13	11	ET 251	ER 6	WL 8	WT 194	WR 6	TOTAL 506
PM Pea	k Hr Beg	nins at·	400	DM		•	•		•	I	•		
		, uc.	100	. 171									
PEAK VOLUMES =	2	0	5	2	0	10	3	134	5	7	105	2	275
PEAK HR.													
FACTOR:		0.583			0.600			0.845			0.814		0.955
CONTROL:	_	way sto										-	'

N-S STREET: Chase Ln

DATE: 1/25/2006

LOCATION: City of El Cajon

E-W STREET: Fuerte Dr

DAY: WEDNESDAY

PROJECT#

	NOF	RTHBOU	ND	SOL	THBOUN	ND	EA	STBOUN	D	WE	STBOUN	ID	
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
6:00 AM			<u></u>										
6:15 AM												-	
6:30 AM													
6:45 AM		0	1	2	1	8	7	28	2	0	34	6	90
7:00 AM	1	0	1 0	2 1	0	9	3	36	1	0	42	1	95
7:15 AM	1	1	0	2	0	16	6	41	1	0	55	3	127
7:30 AM	2	1 1	1	3	0	18	12	55	0	0	66	2	158
7:45 AM	0 1	0	0	0	Ö	11	14	40	1	0	39	3	109
8:00 AM	2	0	1	2	1	15	11	32	1	0	67	2	134 106
8:15 AM 8:30 AM	. 2	0	1	2	0	7	10	-33	2	0	44	5	116
8:30 AM 8:45 AM	2	1	Ō	2	0	6	6	44	1	1	50	3	110
9:00 AM	2												
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM												•	
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													7
OTAL	T NL	NT	NR	SL	ST	SR	EL	ET	ER 9	WL 1	WT 397	WR 25	TOTAL 935
OLUMES =	11	4	4	14	2	90	69	309	9		337		
	1			I			•						
AM Da	aak Hr P	segins at	: 73	0 AM									
Antro	Sak iii E	ogino at	•										
PEAK						60	43	168	3	0	227	10	528
VOLUMES =	5	2	2	7	1	ου	"	100					
				1			1						
PEAK HR.		0.750	1		0.810)		0.799	9	1	0.859	9	0.83
FACTOR:	1	0.750	J	1	0.010	•	•			-		-	

N-S STREET: Chase Ln

DATE: 1/25/2006

LOCATION: City of El Cajon

E-W STREET: Fuerte Dr

DAY: WEDNESDAY

PROJECT#

	NC	ORTHBO	UND	SC	OUTHBO	UND	E	EASTBOU	ND	٧	VESTBOL	JND	
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WĹ 0	WT 1	WR 0	TOTAL
1:00 PM					· · · · · · · · · · · · · · · · · · ·								
1:15 PM													
1:30 PM													•
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM											,		
2:45 PM													
3:00 PM													
3:15 PM					9								
3:30 PM													
3:45 PM													
4:00 PM	1	0	0	8	0	3	6	25	1	1	20	0	65
4:15 PM	1	1	Ö	4	1	4	5	38	1	0	31	1	87
4:30 PM	1	2	1	6	1	2	6	48	0	2	23	1	93
4:45 PM	ō	1	Ō	5	Ō	1	2	31	0	1	20	1	62
5:00 PM	2	1	1	16	0	2	7	47	0	2	33	2	113
5:15 PM	1	Ō	1	7	1	1	3	36	0	2	26	2	80
5:30 PM	1	Ö	ō	11	1	0	4	30	0	1	22	0	70
5:45 PM	1	1	0	6	2	0	4	25	0	1	21	1	62
6:00 PM	-	-	Ū	Ŭ	~	U	T	23	U	1	21	1	02
6:15 PM													
6:30 PM													
6:45 PM													
0.15111													
OTAL	NL	NT	NR	SL	ST	SR	EL	ΕT	ER	WL	WT	WR	TOTAL
OLUMES =	8	6	3	63	6	13	37	280	2	10	196	8	632
			1				1			l		1	
PM Pea	ak Hr Be	gins at:	415	PM									
	. •	-											
EAK OLUMES =	1 4	5	2	31	2	9	20	164	1	5	107	5 İ	355
	•	-	_		-	,	~	104		,	ταλ	ر	200
EAK HR.													
ACTOR:	l	0.688			0.583			0.856			0.791		0.785
ONITTO O	2144	(NO)							•			•	
ONTROL:	2WaySt	op(NS)											

N-S STREET: Chase Ave

DATE: 1/26/2006

LOCATION: City of El Cajon

E-W STREET: Fuerte Dr

DAY: THURSDAY

PROJECT#

	NO	RTHBOL	IND	SOI	JTHBOU	ND	E	ASTBOL	JND	W	STBOU	ND	
LANES:	NL 0	NT 1	NR 0	SL	ST	SR	EL	ET 1	ER 0	WL 0	WT 1	WR	TOTAL
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM								98	0	58	145		355
7:00 AM	0	0	54					78	Ő	64	199		372
7:15 AM	0	0	31					69	2	71	165		335
7:30 AM	2	0	26					77	1	68	175		381
7:45 AM	0	0	60					90	1	36	159		327
8:00 AM	1	0	40					.82	0	32	136		281
8:15 AM	1	0	30					66	0	40	130		277
8:30 AM	1	0	40					78	1	36	131		287
8:45 AM	1 .	1	39					, 0					
9:00 AM													•
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													R I TOT
TOTAL	NL	NT	NR	SL	ST	SR		L E		WL			
TOTAL VOLUMES =	6	1	320		0	0	C	63	38 5	405) 127		
AM P	eak Hr	Begins a	at: 70	MA 00									
PEAK VOLUMES =	2	0	171	0	0	0) 32	22 3	26	1 684	4 () 144
PEAK HR. FACTOR:		0.72	21	ļ	0.00	00		0.	829		0.8	98	0.9

N-S STREET: Chase Ave

DATE: 1/26/2006

LOCATION: City of El Cajon

E-W STREET: Fuerte Dr

DAY: THURSDAY

PROJECT#

	NO	ORTHBO	DUND	S	OUTHBO	UND		ASTBOL	JND	W	VESTBO	JND	
LANES:	NL 0	NT 1	NR 0	SL	ST	SR	EL	ET 1	ER 0	WL 0	WT 1	WR	TOTA
1:00 PM		-											
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM								,		•			
3:30 PM											•		
3:45 PM													
4:00 PM	3	0	39					206	0	33	110		391
4:15 PM	3	0	46					199	. 0	19	107		374
4:30 PM	1	0	41					200	0	27	87		356
4:45 PM	0	0	35					208	1	28	88		
5:00 PM	2	Ō	48					184	1	43	124		360 402
5:15 PM	1	Ō	41					226	1	26	124		
5:30 PM	1	3	43					220	1	30	113		419 411
5:45 PM	1	0	40					203	1	28	121		394
6:00 PM								203	1	20	121		334
6:15 PM													
6:30 PM													
6:45 PM							•						
OTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
OLUMES =	12	3	333	0	0	0	0	1646	5	234	874	0	3107
			í			i				İ		ı	
PM Pea	k Hr Beg	gins at:	500	PM								•	
AK										•			
DLUMES =	5	3	172	0	0	0	0	833	4	127	482	0	1626
AK HR.													
CTOR:		0.900			0.000			0.922		l	0.912	1	0.970
ONTROL:	1WaySt	on(O								-		•	

N-S STREET: Chase Ln.

DATE: 1/25/2006

LOCATION: City of El Cajon

E-W STREET: Chase Ave

DAY: WEDNESDAY

PROJECT#

	NOI	RTHBOU	ND	SO	UTHBOU	JND	. EA	STBOUN	עט.	VVL	STBOUN		
LANES:	NL O	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 1	WT 1	WR 0	TOTAL
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM			_			0		69	4	2	124	0	206
7:00 AM	5		2			0		90	6	2	177	0	280
7:15 AM	3		1			1		93	. 13	2	169	0	289
7:30 AM	10		2			0		78	19	3	152	1	272
7:45 AM	17		2 1			0		87	10	4	181	0	302
8:00 AM	19		1			0		93	15	5	158	0	286
8:15 AM	13		-2			0		59	7	2	142	0	226
8:30 AM	16		0			0		64	9	2	134	0	220
8:45 AM	10		1			0		04	,	-			
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM							•						
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
ווע כבינו									ER	WL	WT	WF	R TOTA
OTAL OLUMES =	NL 93	NT 0	NF 11		ST 0	SR 1	EL 0	ET 633		22	1237		
AM P	eak Hr I	Begins a	t: 7	'30 AM									
PEAK VOLUMES =	59	0	7	0	0	0	0	351	. 57	14	660	1	114
PEAK HR. FACTOR:		0.82	5		0.0	00		0.94	14		0.91	.2	0.9

N-S STREET: Chase Ln.

DATE: 1/25/2006

LOCATION: City of El Cajon

E-W STREET: Chase Ave

DAY: WEDNESDAY

PROJECT#

					· · ·						·		
	NC ·	ORTHBO	UND	S	OUTHBO	UND	E	ASTBOU	ND	W	/ESTBOL	IND	
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 1	WT 1	WR 0	TOTAL
1:00 PM 1:15 PM 1:30 PM 1:45 PM 2:00 PM 2:15 PM 2:30 PM 2:45 PM 3:00 PM 3:15 PM													
3:30 PM 3:45 PM 4:00 PM 4:15 PM 4:30 PM 4:45 PM 5:00 PM 5:15 PM 5:30 PM 5:45 PM 6:00 PM 6:15 PM	7 4 7 5 9 4 5 4		1 1 0 2 0 0		1 0 0 0 0 0 0			210 207 227 231 208 201 189 170	11 9 9 7 15 9 12 6	2 1 0 1 0 0 0	113 126 100 122 116 108 96 99	1 0 0 0 0 0 0	346 348 344 366 350 322 302 281
6:30 PM 6:45 PM TOTAL VOLUMES =	NL 45	NT 0	NR 6	SL 0	ST 1	SR 0	EL 0	ET 1643	ER 78	WL 5	WT 880	WR 1	TOTAL 2659
VOLUMES -	13	U				U		1043		3	000	1	2033
DM Doo	uk Hr Bo	gins at:	415	DM									
	ik III De	yii is at.	413	FIT.									
PEAK VOLUMES =	25	0	4	0	0	0	0	873	40	2	464	0	1408
PEAK HR. FACTOR:		0.659			0.000			0.959			0.917		0.962
CONTROL:	2WayS	top(NS)											

N-S STREET: Damon Ln

DATE: 1/25/2006

LOCATION: City of El Cajon

E-W STREET: Fuerte Farms Rd

DAY: WEDNESDAY

PROJECT# 06-4033-006

	NO	RTHBOU	ND	SOI	JTHBOL	IND	EA	STBOUN	ID	W	ESTBOL	ND	
LANES:	NL 0	NT 1	NR	SL	ST 1	SR 0	EL 0	ET 1	ER 0	WL	WT	WR	TOTAL
6:00 AM 6:15 AM 6:30 AM 6:45 AM 7:00 AM 7:15 AM 7:30 AM 8:00 AM 8:15 AM 8:30 AM 8:45 AM 9:00 AM 9:15 AM 9:30 AM 9:45 AM 10:00 AM 10:15 AM 10:30 AM 10:45 AM	2 1 3 2 2 2 1 1	1 1 0 1 1 2 1 0			0 2 2 0 2 0 0	1 0 6 27 6 1 0	1 3 2 3 2 2 1 1		0 0 0 1 0 1 0				5 7 13 34 13 8 3 2
11:45 AM										1 147	WAT	WR	TOTAL
TOTAL VOLUMES =	NL 14	NT 7	NR 0	SL 0	ST 6	SR 41	EL 15	ET 0	ER 2	WL 0	WT 0	0	85
AM Pe	eak Hr B	egins at:	730	MA 0									
PEAK VOLUMES = PEAK HR.	9	4	0	0	4 0.40	40 7	9	0.68	2	0	0.00	0	0.500
FACTOR:	1-14/21	0.813 y stop EB			0.40		1	2		-			
CONTROL:	1 440	, 500	-										

N-S STREET: Damon Ln

DATE: 1/25/2006

LOCATION: City of El Cajon

E-W STREET: Fuerte Farms Rd

DAY: WEDNESDAY

PROJECT#

06-4033-006

	NC	ORTHBO	UND	SO	UTHBO	UND	Ε	ASTBOUN	ND M	ESTBOUND	
LANES:	NL 0	NT 1	NR	SL	ST 1	SR 0	EL 0	ET 1	ER WL	WT WR	TOTAL
1:00 PM	0	0			2	0	1		0		3
1:15 PM	0	1			0	1	1		1		4
1:30 PM	1	1			1	2	1		0		6
1:45 PM	1	0			1	10	3		1		16
2:00 PM	1	1			1	31	2		1		37
2:15 PM	0	3			1	0	3		1		8
2:30 PM	0	2			1	0	1		2		6
2:45 PM	0	0			0	0	1		Ō		1
3:00 PM	1	1			0	3	2		0		7
3:15 PM	0	0			0	Ō	2		0		2
3:30 PM	0	1			1	Ō	2		Ô		4
3:45 PM	0	1			0	1	1		Ô		2

TOTAL VOLUMES =	NL 4	NT 11	NR 0	SL 0	ST 8	SR 48	EL 20	ET 0	ER 6	WL 0	WT 0	WR 0	TOTAL 97
MID Pea	ık Hr Be	egins at:	145	PM									
VOLUMES =	2	6	0	0	4	41	9	0	5	0	0	0	67
PEAK HR. FACTOR:		0.667			0.352			0.875			0.000		0 453

CONTROL:

N-S STREET: Damon Ln

DATE: 1/25/2006

LOCATION: City of El Cajon

PROJECT#

W STREET:	arms Rd			DAY: WI	EDNES	DAY		PROJE	CT#	06-4033-006			
	NOI	RTHBOUN	ID	SOL	ITHBOUN	ID	EAS	STBOU	ND .	WE	STBOU	ND	·
LANES:	NL 0		NR	SL	ST 1	SR 0	EL 0	ET 1	ER 0	WL	WT	WR	TOTAL
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM		·	•										
3:30 PM									•				4
3:45 PM	^	1			1	1	1		0				4
4:00 PM	0	1			0	0	2		0				9
4:15 PM	1 0	1			4 .	2	2		0				9 5
4:30 PM 4:45 PM	1	1			1	1	1		0				3
5:00 PM	0	2			0	0	1		0				2
5:15 PM	0	1			0	0	1		0				3
5:30 PM	Ő	2			0	1	0		0 0				1
5:45 PM	Ö	0			0	0	1		U				
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													T =0.TA
TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT 0	WR 0	TOTAL 31
TOTAL VOLUMES =	1	9	0	0	6	5	9	. 0	0	0	U		
VOLUMES -							1			1			•
	-								-	•			
PM	Peak Hr	Begins at	: 40	0 PM									
PEAK		/					1 -		0	1 0	0	0	22
VOLUMES =	= 2	4	0	0	6	4	6	0	0	١	3	J	
							1			ŀ			
PEAK HR.					0.417	7		0.7	50		0.0	00	0.61
FACTOR:	1	0.750)	ı	0.417	•	1			-			
			D										
CONTROL:	1-W	ay stop E	ь										

24-Hour Machine Counts

City: San Diego

Project #: 06-4032-008

olumes for	r: Thi	ırsda	v, Ja	nuar	y 26, 20	06			City: Sa	in Diego					110,0	CC //		•	
Location:	Avoc	do F	l fr	om F	lorizon F	tills	Dr to Fu	ierte Dr									WB		
		JUO IL	SB		EB		WB		. Pl	4 Period	NB		SB		E.B		VVD		
M Period										12:00	0		153						
00:00	5	٠	8							12:15	0	•	184	•					
00:15	13		11							12:30	0		139			•			629
00:30	9		20						81	12:45	0	0 .	153	.629					023
00:45	7	34	.8	4	/					13:00	0		139						•
01:00	10		13		•		٠		•	13:15	0.		156	·					
01:15	4		6		•					13:30	0		· 130	•	-				
01:30	3		6						F4		. 0	0	174	599					599
01:45	. 3	20	6	3	31				51	13:45		·	162						
02:00	5		11	L					•	14:00	176		102 145						
02:15	6		9							14:15	135							•	
02:13	4		4					<i>:</i> ·		14:30	125		177	695					1271
02:45	4	19	5		29				48	14:45	140	576	211	093					,
										15:00	150		193						
03:00	5									15:15	144		191						
03:15	5		(15:30	175		225						1491
03:30	3				4.1		•	• .	26	15:45	153	622	.260	869					
03:45	2	. 15			11		•			16:00	197		243						•
04:00	. 0			3						16:15	167		220	•					
04:15	0			9:						16:30	193		206						
04:30	0			.7					37	16:45	194	751	207						1627
04:45	. 0	0		8	37				37		216		216						
05:00	0		:	12						17:00			215						
05:15	0			25.						17:15	198	•	208						
. 05:30	. 0			57						17:30	167	747				•			1588
05:45	0	e			141				141 ·	17:45	162	743							
				62	,				•	18:00	144		164						
06:00	0			63						18:15	127		. 135					•	
06:15	0			95.						18:30	112		118				•		1004
06:30	0				355				355	18:45	95	478	3 10	9 526					
06:45	0				333					19:00	91		97	,					
07:00	0			136						19:15	92		94	ļ.	• •			ξ.	
07:15	0			141			•	•		19:30	79		86	5					400
07:30	0			166	•				698	19:45	68	33			3				688
07:45	. 0		0	255	698				090				8					•	
08:00	Ċ	,		197						20:00	78		7						
08:15	_			152						20:15	55		6				•		
08:30			. ′	167				•		20:30	. 53	2		, 1 31	1				555
08:45	_		0	162	678			·	678	20:45	58								
)		149	,					21:00	6,7			0					
09:00		0		143	•					21:15	48			59					
09:15				144						21:30	54			52	(5		•		450
09:30			0	142	578				578	21:45	39	2		51 24	12				
09:45		0			2/4					22:00	47	,		19	,				
10:00		0		139						22:15	. 28	3	٠.	45					
10:15		0		154						22:30	35			26					283
10:30		Ø		157	F07				597	22:45	25		35	28 1	48				203
10:45	5	0	0	147	597					23:00				29			•		
11:00	0	0		152						23:15				25					
11:1	5	0		165	•			•		23:30				11 .					
11:30		0.		165					659	25:30 25:45					83				141
11:4		0	0	177	659				929	۵.+3					-				10326
			00		3861				3949	I		· 4	145	. 6	181				
Total \	vol.		88		2001											. D	aily Totals	W.B	Combin
													NB		SB.		EB	VV.D	
	•									,			233	10	0042				14275
			•						*,								PM		
							AM			0/		-1	0.1%	5	9.9%				72.3%
Split	%	.: -	2.2%	0	97.8%				27.7	7/0									16:30
-					07:45				07:4	5			16:30	. :	15:30				
Peak l			00:13	•					771				801		948				1645 0.95
Volu	me		39		771 ·				0.70		•		0.95		0.91				0.53
P.H.	.F.		0.75		0.76					-					•				•

ròcanon.	Avocado Bl	rrom	ruerte	e Dr to) Expl	orer R	d									
M Period	NB	SB	E		w			PM Period	NB		SB .	· EB		· WE) .	
00:00			15	5	10)		12:00			:	144	-	185). 	
00:15			19		11			12:15			•	146				
00:30			. 14	1	. 23	3		12:30				153		204		
00:45			11	. 59			112			•		179	622	164	704	
01:00		-	9		12			13:00					622	178	731	1353
01:15			. 9		. 7	-	•				٠.	· 163		170	•	
01:30			9		8			13:15				195		180		
01:45			4	31		36	67	13:30				159		173		
02:00							67	13:45				178	695	207	730	1425
02:15			12		. 13			14:00				217		200		
02:30			11		10	1		14:15				196		215		
02:45			. 7		7			14:30				177		200		
		<u> </u>	1	31	3	33	64	14:45				189.	779	231	846	1625
03:00			11		2			· 15:00 ·				194		· 195		
03:15			. 4		2			15:15				248	٠.	194	•	•
03:30	•		2		· .5		•	15:30				235		224		
03:45			10	27	6	15	42	15:45		•	•	228			064	
04:00			6		. 5								905.	248	861	1766
04:15	÷		10	•	7			16:00				257		215		•
04:30			11		. 21	•		16:15.				232		201		
04:45	•	·	13	40	14	47	0.7	16:30	•			253		208		
05:00				10			87	16:45				256	998	220	844	1842
05:15			18		11			17:00				263		205		
05:30			27.		36			17:15				269		211		
05:45			34		72			17:30				238		201		
		·	59	138	66	185	323	17:45				240	1010	186	803	1813
06:00			59		88			18:00				224	i	191		1013
06:15	•		76		92			18:15				223		153		
06:30			80		146			18:30				169		151		
06:45	-		102	317	190	516	833	18:45					770		C22:	
07:00			175		183							154	770	137	632	1402
07:15			. 229		203			19:00				149		119		•
07:30	•		.228		199			19:15				. 132		123		
07:45			285	917	265	950	1207	19:30				114		95		
08:00				317		850	1767	19:45				113	508	102	439	947
08:15			253		203			20:00				104		104		
			253	•	171			20:15		•	•	97		95		
08:30		•	245		186			20:30				90		87		
08:45			242	993	180	740	1733	20:45				92	383	113	399	782
09:00			155	•	166			21:00							333	702
09:15			113		162			21:15				91	,	94		
09:30			135		152			21:30				94		82		
09:45	-		127	530	158	638	1168	21:45				73	200	65		•
10:00			112	•	167					 		64	322	61	302	624
10:15			124		169			22:00				64		67		
10:30			122		181			22:15				52		51		
10:45			119	477		700	4400	22:30				45		35		
				<u> </u>	192	709	1186	22:45				35	196	· 31	184	380
11:00			127.		182			23:00·				22		38		
11:15			150		183		•	23:15	•			25		24		
11:30			141		195			23:30	:		•	· 19		11.	•	
11:45			164	582	197	757	1339	23:45				23	89.	18	91	180
al Vol.				4142		4579	8721			· · · · · · · · · · · · · · · · · · ·			7277.		6862	14139
		•					ě						aily To	tals	3002	14133
• • •			·							IB	SB		EB		₩B	Combined
	· · · · · ·			AM.							•		11419 PM	·	11441	22860
lit %				47.5%		52,5%	38.1%						51.5%		48.5%	61.9%
k Hour			•	07:45		07:15	07:15						16:30		15:30	16:30
lume . H.F.			:	1036		870	1865	•					1041		. 888	
				0.91			0.85									1885

olumes for: Location: Fu	weunes	uay, Jo	ر اعاما ،، العام	0 Dr t	o Av	ocado	o Bl		·	an Diego				EB		WB		
Location: FL AM Period N	erte Di	SB	Calav	EB		WE	3		. <u>b</u>	M Period 1	IB	-	SB	. ` 69 ·		77	•	
00:00				8		6				12:00 .				46		71		•
00:15				4		2				12:15				35		71		
00:30				5		8		,	26	12:30 12:45				42	. 192	61	280 ·	472
00:45				2	19		1	/	36	13:00				46		75		
01:00				0		1				13:15			٠.	43		68	٠.	
01:15				1		~ 0 3				13:30			•	52	405	60 71	. 274	459
01:30		•		2. 3	6	2		6	12 ·	13:45				44	185	71	. 2/7	
01:45 .				<u></u>		2				14:00				55		81 67	•	
02:00	•			2		1				14:15				47 46		73.		
02:15				2		1				14:30		•		51	199	51	272	471
02:30		• •		1	. 7		2	6	13	14:45 .				51		· 85		
02:45				1		()		•	15:00			٠	49		74		
03:00 03:15				1		:	2			15:15				56	٠,	75	•	•
03:30	•	•	•	O	٠.		3	٠.		15:30				53	209	66	300	509
03:45				1	3		1	6	9	15:45				46		84	•	
04:00				. 3			3			16:00	•			44		91		
04:15				0			6			16:15 16:30				52		55		. 494
04:30		•		4			5 6	20	32	16:45				47	189		295	484
04:45				5	1	<u>-</u>		20	<u> </u>	17:00				44		60		
05:00		٠.		4			5 15			17:15				56		75		
05:15				4 3	•		13 24			17:30				46		85 1 66		477
05:30				12	. 7		27	71	94	17: 4 5			<u>.</u>	45		60		
. 05:45				10			35			18:00				52		. 53		
06:00				. 19			55			18:15				5. 58	1 :	34		
06:15 -06:30				33			71			18:30				59				405
06:45				33	3 9	95	94	255	350	18:45				6		36	5	
07:00				45	5		75			. 19:00				. 5		2.9		
07:15				45	5		86			19:15				6		19		
07:30				83			75			19:30 19:45				. 4	7 22	3 4	1 125	348
07:45	·			7	6 2	248	90	326	574					. 6	9	3		
08:00	-			· . 6			86			20:00 20:15	•			2	19	3		
08:15					5		50			20:30				٠ ز		2		338
08:30					66 • 7	244	41 48	225	469	20:45							4 113	330
08:45						247	61			21:00					51 .		27 ·	
09:00					54 41		66			21:15					53 .		25 . 11	
09:15					68 68		83			21:30					45 30 1		7 70	249
09:30 09:45	•	•	•			221	67	277	498	21:45					26 [.]		10	
					53		64			22:00			•		15		5	
10:00 10:15					48		65			22:15				•	17		9	
10:30					52		63			22:30						74	3 27	101
10:45					59	212	45		. 449						11		3	
11:00					56,		71			23:00 23:15			•		17		3	•
11:15					58		74 62			23:30					14		7.	61
11:30					68 58	240	62 76		. 52				··		5	47	1 14	
11:45					JO		-								;	2133	2241	4374
Total Vo	ı.					1330)	1729	305						Da	aily Tol	tals	Combine
					•					•			NB:	· SB		EB.	MR	
												_				3463	3970	7433
٠,						414						· .				PM	F4 007	58.8%
•						AM		56.5	% 41.	2%						48.8%	51.2%	
Split o	6					43.5										18:45	15:30	
Peak Ho	ur	•	•			07:3		07:		:15						235	316	515
Volum						289	•	33 0.9)6						0.90	0.87	0.95

Location:		sday, Jan				on I =	City	: San Diego				Pro	oject#	: 06-4	032-00	2
AM Period	NB NB	SB		B E	Dam W			PM Period	NB	SB		ED	•	1410		
00:00			3	}	2			12:00				EB		WB		
00:15			0		2							30		34		
00:30			1		.1			12:15		•		32		27		
00:45			1		0	5	10	12:30 12:45				39		51		•
01:00			1		0		10					45	146	41	153	299
01:15	•		0					13:00				30		33		
01:30					0			13:15	:			49		49 .		
01:45			0		1			13:30				51		36		•
· · · · · · · · · · · · · · · · · · ·			0		0	1_	2	13:45				44	174	40	158	332
02:00			0		. 0			14:00				45		75		•
02:15			0		1			14:15		•		26		31		
02:30			0		2		· '.	14:30				24		31		
02:45			0	0	1	· 4	. 4	14:45	•			19	114	28	165	270
03:00			. 0		0			15:00					117		165	279
03:15			0	•	0	:						34.		24		•
03:30	•		0		0			15:15 15:20				26		25		
03:45	-		0	0	-0	. 0		15:30	•			21		27		
04:00	***		0					15:45				.30	111	27	103	214
04:15		٠.			0		•	16:00				45		21	•	
04:30			2		. 1		•	16:15				43		19		
04:45			1.	_	0			16:30				46		17		•
			3	6	1	2	8	16:45				43	177	23	80	257
05:00			. 0		2,		*	17:00		٠.		35		19		
05:15			7		2		•	17:15	•			26		25		
05:30			9.		1			17:30				46		16		
05:45			10	26	_ 1	6	32	17:45				41	148		70	226.
06:00 ·			16		1			18:00					140	18	78	226
06:15		•	20		 2				•			26		21		
06:30			27		6			18:15				22		23		
06:45			37	100	23	32	122	18:30			•	12		24		
07:00	**************************************			100		- 32	132	18:45				8	68	15	83	151
07:15		•	25		22		•	19:00				12	•	18		
07:30		•	29		13			19:15				9		6		
			50		. 32			19:30				7	•	19		
07:45			58	162	89	156	318	19:45		•		6	34	5	48	82
00:80	٠.		20		17			20:00			**************************************	7				
08:15			19		12			20:15				5		14		
08:30			13		13			20:30	•			3 7		15		
08:45			13	65	17	59	124	20:45					20	6		
09:00			21		18							11	<u>30</u>	14	49 -	79
09:15			16		15	•		21:00				13		8		
09:30			30.		19			21:15				7		15		
09:45			32	99	24	76	470	21:30				1		9		
10:00		,		- 33		76	175	21:45		· · · ·		1	22	2	34	56
			23		16			22:00				2		4		
10:15 ⁻ 10:30			13		9			22:15				2		2		
			15		23			22:30		•		1		4 .		
10:45	····		23	74	21	69	143	22:45			•	1	6	2	12	. 18
11:00			27		28			23:00		***************************************	· · · · · ·	1	 -			. 10
11:15		•	22	•	24			23:15						1,		
11:30		•	31		39			23:30	•			1		1 .	* * •	٠.
11:45			34	114	28	119	233	23:45	•			2 0 .	٠ ،	1		_
tal Vol.				652		529	1181					0	1034	1	967	8 2001
												-		1		
						•			NB		SB	D,	aily Tot EB	ais	WB	Combined
				A·N#		•	• •						1686		1496	3182
				AM		44.004	27.40/						PM		•	
lit %			•	55.2%		44.8%	3/.70/				•					
				55.2% 07:00			37.1% 07:00			·	·		51.7%		48.3%	62.9%
olit % ak Hour olume				55.2% 07:00 162		97:00 156	07:00 318	•			•		51.7% 13:15		48.3% 13:15	62.9%

Average Daily Traffic Volumes

Prepared by: Southland Car Counters

Project #: 06-4032-003 City: San Diego Volumes for: Wednesday, January 25, 2006 -Location: Fuerte Dr from Damon Ln to Chase Ln WB SB PM Period WB ΕB AM Period NB SB 12:00 00:00 12:15 00:15 12:30 00:30 12:45 00:45 13:00 2. 01:00 13:15 01:15 13:30 01:30 13:45 01:45 14:00 02:00 14:15 02:15 14:30 02:30 14:45 02:45 15:00 03:00 15:15 03:15 15:30 03:30 15:45 03:45 16:00 04:00 16:15 Ô 04:15 16:30 04:30 16:45 04:45 17:00 05:00 17:15 05:15 17:30 05:30 17:45 05:45 18:00 06:00 18:15 06:15 18:30 06:30 18:45 06:45 19:00 07:00 19:15 07:15 19:30 07:30 19:45 07:45 20:00 08:00 20:15 08:15 20:30 08:30 20:45 08:45 21:00 09:00 21:15 09:15 21:30 09:30 21:45 09:45 22:00 10:00 22:15 10:15 22:30 10:30 22:45 10:45 23:00 11:00 23:15 <u>2</u>9 11:15 23:30 11:30 23:45 11:45 Total Vol. **Daily Totals** Combined WB ÉΒ SB NB. PM AM. 51.3% 48.1% 51.9% 62.1% 48.7% 37.9% Split % 13:30 13:15 15:45 07:00 07:00 07:30 Peak Hour 0.82 0.74 0.83 Volume 0.60 0.65 0.54

P.H.F.

Location:				nuary 25				City	: San Diego					Pro	ject #:	06-4	032-004	
AM Period		DF	SB	Cnase Ln EE		ase A WE			PM Period	NB		SB		· EB		WB		
00:00				3		1			12:00			راو		24				
00:15				1		2			12:15				· ·	31		2 <u>7</u> 25		
00:30		•		2		0			12:30								•	
00:45				1	7	1	4	11	12:45					18 18	01	20	90	
01:00						0									91	17	89	· 180
01:15				. <u>2</u> 0					13:00			•		26		26		
01:30						1			13:15					21		20		•
01:45				0	٠.	1	_	_	13:30					19		15		
					3	. 0	2	.5	13:45					34	100	19	80	180
02:00				2.		0			14:00				•	28		· 21		
02:15				0		0			14:15					24		20	•	
02:30				1		1			14:30					32		24		
. 02:45				0	3	2	3	6	14:45					19	103	,25	90	193
03:00	•			0		0	•		15:00					41		29		
03:15				. 0		0			15:15		•	1.		40		29		
03:30			•	0-		0	,		15:30 ·					29		32		
03:45				0	. 0	1	1	1	15:45		•			32	142	25	115	257
04:00				. 0.		1			16:00					48	- 14			4.01
04:15				1		1			16:15							29		•
04:30				0		0			16:15					36		27		
04:45				σ	1	0	2	3	16:45					35	467	22	405	
05:00														48	167	. 27	105	272
05:15				1		4		•	17:00					50		24		
05:30				4 9		4		•	17:15					35		29		
05:45					22	2			17:30		-			46		21		
				8	22	3	13	35	17:45					. 40	171	31	105	276
06:00				11		5			18:00					29		. 24		· . ·
06:15				13		6			18:15		•			17		21		
06:30	•			* 28		11			18:30					14		29		
06:45				30	82	24	46	128	18:45					15	75	20	94	169
07:00				44		70			19:00					14		26		
07:15				. 44		30			19:15					13		13		
07:30				· 71		43		•	19:30				•	22		12		
07:45				66	225	118	261	486	19:45					14	63	10	61	124
08:00				28		52			20:00				***************************************					127
08:15				. 26		39			20:15					14		10		
08:30				28		37			20:30					12		10		
08:45				.22	104	31	159	263	20:45	•		•		16	60	16	46	405
09:00				29				203						18	60	10	. 46	106
09:15				18		20			21:00					17		7		•
09:30			•			20			21:15					11		8		
09:30				16	or	19	0.0	470	21:30					3		8		
	<u> </u>			. 23	86	27	86	172	21:45					_2_	33	_ 1	24`	57
10:00				16		27	•		22:00					5		8		
10:15				13	<i>:</i>	12			22:15			1		4		3		
10:30				26		16			22:30					2	•	· 1	٠.	
10:45		· · ·		19	74	15	70	144	22:45					5	16	2	14	30
11:00	•			18		21			23:00	:			•	1		4		
11:15				23		. 19		٠.	23:15					. 2		3		
11:30				14		17			23:30			•		. -		2 .		•
11:45	-			28	83	23	80	163	23:45					ō	8	1	10	18
otal Vol.			•		690		727	1417							1029		833	1862 ′
	•					•			•					t	Daily To	tals		
											NB		SB		EB		WB	Combined
			•					•							1719		1560	3279
115 A /			·		AM	·									PM	١.	•	
plit %	**************************************				48.7%		51.3%	43.2%							55.3%		44.7%	56.8%
ak Hour					07:00		07:00	. 07:00	•						16:45		14:45	16:45
Volume					225		261	486							179		115	280
P.H.F.					0.79		0.55	0.66							0.90		0.90	0.93

lumes for:	Thurs	day, J	anuan	, 26, 200	6			ity: San	Diego				,.	t#: 06			
ocation: F	uerte F	arms	Rd fr	om Fuert	e Dr to	Dam	ion Ln	DM	Period N	R.	SB	•	EB .	W	/B		
M Period	NB ·	S	В	. EB		VB ·			2:00		•		1	1	L		
00:00				0		1			2:15				0 .	()		
00:15		•		0		0	•		12:30				1	:			_
00:30				0		0 0	1 .1		12:45				0	2	1	3	5 ·
00:45				0			1		13:00			•	2		1		
01:00	•		. :	0.		0			13:15				2		2 .		
01:15				0	•	0			13:30				3		8		40
01:30				0.	0 ·	0.	0		13:45				3		27	38	48
01:45				0	0				14:00		,		5		5	·	
02:00				O		0 . 0 ·			14:15				3		2		
02:15				0. 0		0			14:30				1	•	3		าว
02:30	•			0.	0	0	0		14:45				3	12	1		23
02:45						0 .			15:00				2		3		•
03:00				. 0		.0			15:15			•	2		0		
03:15				0		0			15:30			1	1		1		11
03:30				0	0	. 0	0		15:45				2	7	0	4	11.
03:45						0			16:00				. 3		2		
04:00				0 2	•	2			16:15 .	•			2		1		
04:15				1		0.			16:30				. 1	_	0	-	12
04:30				1	4	0	2	6	16:45			·	1		2	5	
04:45				0		0 .			17:00				0		1		
05:00				0		· 1			17:15				1.	÷	0		
05:15				i		Ô	•		17:30				0	.	1 0	2.	4
05:30				2	3.	1	2	5 .	17:45			<u> </u>	1 .	2			
05:45				1		0			18:00				2		4		
06:00				0		0			18:15				. 0		1		
06:15				2		0			18:30				1	5	3 0	8	13
06:30				4	7	0	0	. 7	18:45				2.				
06:45				. 2		3			19:00				2		1 0		
07:00				2		3			19:15				0		0		
07:15				1		6			19:30				0	2	0	1	3
07:30				5	10	27	39	49	19:45								
07:45				1		13			20:00				0		1 0		
08:00				5		5			20:15				1		0		
08:15				1		. 1	•		20:30				. 2	3	3	4	` 7
08:30 08:45				0	7_	2	21	28	20:45								
				. 2		0			21:00				0		1 1		
09:00 09:15				3		2			21:15				0		Ō.		•
09:30				2		1			21:30				0	0	0	2	2
09:45				6	13	3	6	19	21:45		<u> </u>				0		
10:00				0		1			22:00				0		0		•
10:00				1		2	•		. 22:15			•	0		0		•
10:30				0		3			22:30				0		Ö	0	
10:45	•			. 1		1	7	9	22:45						0		
11:00				ż	2	1			23:00				0		0		
11:00			•	4		2			23:15			٠.	. 1		0		
11:30				C		. 0			23:30					2		0	2
11:45					8	0	3	11	23:45							78	130
	\ <u></u>			:	54		. 81	135				•		52			250
Total Vo)l.			•	٠.								C D	Daily	Total	is WB	Combine
											NB .		SB	EE			. 265
		٠												106		159	
					AM	ı					`.				M	60.006	49.1%
0.114.0	· ·		 		40.0		60.0%	50.9%	<u> </u>					40.0	J%	60.0%	
Split o	/0													13:	30	13:15	13:30
Peak Ho	our			•	09:		07:30	07:30						1		42	56
Volum	e				1.		51	63						0.		0.39	0.47
					. 0.	54	0.47	0.49				٠.				•	

LOCULION.	Dam	ion L			erte Dr to	Fuerte F	Farms Rd							٠.	
AM Period	NB	-	S	B	EB	WB		PM Period	NB.	• •	SB		EB	WB	
00:00	0		. 0					12:00	1 .		2				
00:15	0		0					12:15	0		1				
00:30	0		0					12:30	1		1				
00:45	0	0	0	0			**	12:45	1	3	0	4	•		7
01:00	0		· 1		•		•	13:00	1		3				
01:15	0		. 0					13:15	0		1				
01:30	0		0					13:30 ⁻	3		6				
01:45	_0_	0	0	1			1	13:45	8	12	18	28			40.
02:00	0		0					14:00	12		6				40
02:15	0		0.			•		14:15	8.	•	1	•			
02:30	0		0					14:30	3		.1		•		
02:45	Ó	. 0	0	0	•		••	14:45	2	25	2	10			
03:00	0		0									10		~	35
·03:15	0		· 0.					15:00	5		0				
03:30	0		0					15:15	1		0				
03:45	0	0	1	1			•	15:30	1		1	_			•
04:00	0	<u>~_</u>	0.				1	15:45	4	11	2	3		,	14
04:00	0		0.		•			16:00	3		1		•		
04:30	0		0					16:15	0		3	•			
04:45	2	2	Ø	0				16:30	2 ·		7 .			•	
							2	16:45	2	. 7	2	13			· 20
05:00	U		0					17:00	1		0	•			
05:15	0		0					17:15	0	•	1				
05:30	0	^	0.	•	-			17:30	0		0				
05:45	.0	0	0	. 0				17:45	1	2	1	2			4
06:00	2		Ö					· 18:00	3		3				
06:15	0		1					18:15	0		. 0				
06:30	0		0					18:30	1		4	. •			
06:45	0	·2.	0	1			3	18:45	1	5	0	7			. 12
07:00	2		0	•				19:00	0.		2				
07:15	.1		2					19:15	1		0			•	
07:30	.2		6						· 2		1				
07:45	20	25	22 .	30			55	19:45	Ó	3	1	4			7.
08:00	11		7				, , , , , , , , , , , , , , , , , , , 	20:00	0						
08:15	3	•	1					20:15	0		1.				
08:30	2 .		o.		•			20:30	0		1				*
08:45	3	19	2	10			· 29	20:30	0	0	0.	2		•	
09:00	5		0 ·								0.	2			2
09:15	0		0	•				21:00	1		1		•		
09:30	1		5					21:15	0	•	0				
09:45	2.	8	2	7			. 15	21:30	0		0				
10:00	0		4				15	21:45	0	_1	0	_1			2
10:15	0		0					22:00	0		0	••			
10:30	1		2	•				22:15	1		1				
10:45	Ô	1	0	6				22:30	0		0	•	•		
	2						7	22:45	0	_1	1	22	·····		. 3
11:00 11:15	1		1					23:00	0		0		•		
	1		2					23:15	0	•	0				
	0	4	10.	.4		٠		23:30	0		0	٠.			
			<u> </u>	-			. 8	23:45	0	0	0 .	0			
tal Vol.		61	- 1	60			121			70		76			146
													Daily Tot	ale	
										NB		SB	EB	· WB	Combined
					•		* 1			131		136			
	_				AM							200	. DM		267
olit %	50	0.4%		49.6%			45.3%		. 4	7.9%		52.1%	PM	***************************************	· FA 70/
k Hour		7:30		07:15											54.7%
olume		36					. 07:30		:	13:30		13:15			13:30
P.H.F.		36).45		37 0.42			72			31.		31	•		62
	,			U.72			0.43			0.73		0.43			0.60

umes for: Thursday,	January 26, 2006		City: San D	= '			WB	
ocation: Chase Ave	from Bernita Ru to t SB <u>EB</u>	WB ·	PM Pe	eriod NB	SB	EB	111	
IT CHOO THE	15	13.	. 12:	:00		98 109	115	
00:00	12	7		:15	•	120	102	
00:15	9	6		1:30		108 435	113 441	876
00:30	17 53	7 33	86 12	2:45		125	102	
00:45	9	· · 5	13	3:00		124	100	
01:00	12	6		3:15		122	106	
01:15	5	2		3:30		137 508		928
01:30	4 30	4 · 17		3:45		140	155	
01:45	3	3	1	4:00		141	143	
02:00	9	1.		4:15		160	126	
02:15	.6	2 .		14:30		160 60	1 121 545	1146
02:30	5 2	3 1 7	30 1	14:45		198	146	
02:45	2.	2	1	15:00		168 .	137	
03:00	4	2		15:15		180	114	
03:15	3	4		15:30			12 125 522	1264
03:30		1 9 17		15:45		211	126	
03:45	3	6		16:00		207	112	
04:00	4	5		16:15		212	109	
04:15	6	16		16:30			17 80 427	1244
04:30		22 16 43		16:45		190	140	
04:45	4	29		17:00.		241	126	•
05:00	9	38		17:15		225	101	
05:15	16	57		17:30			340 114 481	1321
05:30	18	47 62 186	233	17:45		182	111	
05:45	17	· 77		18:00	•	198	89	
06:00	28	. 88		18:15		167	101	
06:15	27	128		18:30	•		719 83 384	1103
06:30		151 123 416	567	18:45	·	140	71	
06:45	111	. 157		19:00		132	68	
07:00	67	175		19:15		118	67	
07:15	75	166		19:30			489 50 256	745
07:30	83	336 186 684	1020	19:45		84	49	•
07:45	95	162		20:00		78	62	
08:00	. 90	179		20:15		95	. 57	
08:15.	104	144	•	20:30		106	363 40 208	571
08:30 · 08:45	. 78	367 168 653	1020	20:45		. 78	62	•
	70	118		21:00		70 72	36	
09:00	83	129		21:15		76	26 -	
09:15	79	118		21:30		49	275 36 160	0 435
09:30 09:45	. 94	326 111 476	802	21:45		54	32	
	. 65	118		22:00		39	15	
10:00	85	85		22:15		35	15	
10:15 10:30	. 70	125		22:30		32	160 20 82	2 242
10:45	96	316 83 411	727			31	25	
	86	115 ·		23:00		34	7	•
11:00 11:15	86	119		23:15	•	. 21	10	
11:15	. 116		- 007	23:30 23:45		19	105 7 4	9 154
11:45	99	387 98 450	0 837	43:43			6054 39	75 10029
		2069 ⁻ 339	93 5462	•			Daily Totals	
Total Vol.							EB V	NB Combine
					NB.	SB .		368 15491
	÷		•	٠,			PM	
		AM			<u> </u>		60.4% 39	9.6% 64.7 %
		37.9% 62.	.1% 35.3%	0				
Split %								
Peak Hour	•		7:30 07:45 93 1043	:				545 1321 0.88 0.90
Peak Hour		426 69						

	or: Thursday						City	: San Diego				Pr.	oject #	.06-4	032-007	
Location: AM Period	Chase Ave NB	from F SB	uerte I Ef		R-54/ WI		cha Rd	DM Davis d	ND	0.5						
00:00		<u> </u>	. 8					PM Period	NB	SE	3	EB		WB		
00:15			3		. 14 16			12:00				75		69		
00:30			4		14			12:15				74		85		
00:45			4	19	. 6	50	69	12:30	•			93		68		•
01:00			4				09	12:45				64	306	88	310	616
01:15			2					13:00	·.*			61		84		
01:30			0		13			. 13:15				7.7		71		
01:45			2	8	11 8	39	47	13:30				-85		89		
02:00						39	47	13:45				103	326	88 [.]	.332	658
02:15	•		2		5			14:00				143		93	•	
02:30	•		0 2		. 7			14:15				187		104		
02:45	•		2	_	.4			14:30				186		92		
				6	2	18	24	14:45	<u> </u>			176	692	112	401	1093
03:00			2		3			15:00			•	276		· 91		,
03:15 03:30	•		4		1			15:15			•	279.		93		
		•	2		. 1			15:30	• 5			221	•	110		• • •
03:45	· · · · · · · · · · · · · · · · · · ·	·	· 3	11	1_	6	17	15:45				271	1047	123	417	1464
04:00			2		.3			16:00				244		126	,	
04:15			4		2			16:15			•	216		134		
04:30			9		5			16:30				182		143		
04:45			10	.25	. 6	16	41	16:45				184	826	141	· 544	1370
05:00			13		14			17:00				314		111		***************************************
05:15			20		2:1			17:15				278		142		•
05:30			34	•	27			17:30				230		145		
05:45			. 38	105	45	107	212	17:45				229	1051	117	515	1566
06:00			48		68			18:00				192		101		
06:15			56		108			18:15				176		119		
06:30			76		148			18:30	•			94		92		
06:45			82	262	186	510	772	18:45				72	534	105	417	951
07:00	. •		132		280			19:00	**			60	- 551	87	127	331
07:15		•	156		182	•		19:15				52				
07:30			138		158			19:30				39		75		
07:45			134	560	222	842	1402	19:45				31	.100	85	220	E40
08:00			120		185								182	81	328	510
08:15	•		106		192		•	20:00 20:15				44		76		
08:30			108		185			20:30				36		69		•
08:45			104	438	142	704	1142	20:45				36	1.40	54	20.4	
09:00			102		87							32	148	85	284	432
09:15			67·		92			21:00				36		67		
09:30			75 ⁻		78			21:15				31		56		
09:45			60	304		365	669	21:30 21:45				18	100	45		
10:00			54		87							17	102	52	220	322
10:15			64 ·		61		•	22:00				. 10		51		
10:30	•		60	٠.	69 of			22:15				14		39		
10:45			70	248	79	296	5 44	22:30				10		33	-	
11:00			6.4	- 10) 111	22:45		<u> </u>		10	44	35	158	202
11:15	•		71		63 66	•		23:00				11		28		
11:30			72		66 70			23:15				6		21		
11:45			62	269	70 82	281	550	. 23:30				. 7		23		
		·			UZ	201	550	23:45			•	6	30	29	101	131
tal Vol.				2255		3234	5489						5288		4027	9315
							•						Daily To	tala.		2020
		٠.						•	NB		SB		EB	C012	WB	Combine
			•										7543		7261	
			-	AM	•										/201	14804
lit %				41.1%		58.9%	37.1%			·	·		PM 56.8%		43.30/	62.00/
k Hour										-	·				43.2%	62.9%
				07:00		07:00	07:00						17:00		16:00	17:00
olume .H.F.				560		842	1402						1051		544	1566
****	•			0.90		0.75	0.85			•			0.84		0.95	0.92

64000

66000

5500 1900

> 4150 5500

50000 48500

4150

59000 57000

4900

Ahead AADT

Ahead Peak Month

Ahead Back Peak AADT Hour

Back Back Peak Peak Hour Month

	District Route Suf County Prefix Postmile Description	13.14 END FREEWAY	13.33 AVOCADO BOULEVARD	13.54 MILEPOST EQUATION =13.59	14 33 JAMACHA ROAD		14.86 JCI. KIE. 34 NOKIT
PM	Prefix	œ	<u>~</u>	22			
	County	SD	SD	C.	3 6	ם כ	C.S.
Rte	Soute Suf	94	94	04	5 6	95 45	70
	District F	7	7	. +	- ;		7

			·
			•
			4
			1
			· ·
		• .	•
			•
			·
	÷		•
			•
			1
			•
			•

SANDAG Trip Generation Rates

			1
			ı
			•
			•
			•
			I
			1
			1
			I
			I
			-
			•

(NOT SO) BRIEF GUIDE OF VEHICULAR TRAFFIC GENERATION RATES FOR THE SAN DIEGO REGION



APRIL 2002

401 B Street, Suite 800 San Diego, California 92101 (619) 699-1900 • Fax (619) 699-1950

NOTE: This listing only represents a *guide* of average, or estimated, traffic generation "driveway" rates and some very general trip data for land uses (emphasis on acreage and building square footage) in the San Diego region. These rates (both local and national) are subject to change as future documentation becomes available, or as regional sources are updated. For more specific information regarding traffic data and trip rates, please refer to the San Diego Traffic Generators manual. Always check with local jurisdictions for their preferred or applicable rates.

LAND USE TRIP CATEGORIES [PRIMARY:DIVERTED:PASS-BY]	ESTIMATED WEEKDAY VEHICLE TRIP GENERATION RATE (DRIVEWAY)		PEAK HOUR 00-9:30 A.M.			TRIP LENGT
AGRICULTURE (Open Space)[80:18:2]	2/					
	2/acre**					10.8
AIRPORT [78:20:2] Commercial	50/a 100/61-ba 70/4000 5: 4 4 4					12.5
General Aviation	60/acre, 100/flight, 70/1000 sq. ft.* * * 6/acre, 2/flight, 6/based aircraft * * *	5% 9%	(6:4) (7:3)	6% 15%	(5:5) (5:5)	
Heliports	100/acre**				(=.=,	
AUTOMOBILE ^s Car Wash						
Automatic	900/site, 600/acre**	4%	(5:5)	9%	(5:5)	
Self-serve Gasoline	100/wash stall * *	4%	(5:5)	8%	(5:5)	
with/Food Mart	160/vehicle fueling space * *	7%	(5:5)	8%	(5:5)	2.8
with/Food Mart & Car Wash Older Service Station Design	155/vehicle fueling space * * 150/vehicle fueling space, 900/station * *	8%	(5:5)	9%	(5:5)	
Sales (Dealer & Repair)	50/1000 sq. ft., 300/acre, 60/service stall* **	7% 5%	(5:5) (7:3)	9% 8%	(5:5) (4:6)	
Auto Repair Center Auto Parts Sales	20/1000 sq. ft., 400/acre, 20/service stall* 60/1000 sq. ft. **	8% 4%	(7:3)	11%	(4:6)	
Quick Lube	40/service stall * *	7%	(6:4)	10% 10%	(5:5)	
Tire Store	25/1000 sq. ft., 30/service stall * *	7%	(6:4)	11%	(5:5)	
CEMETERY	5/acre*					
CHURCH (or Synagogue) [64:25:11]	9/1000 sq. ft., 30/acre** (quadruple rates for Sunday, or days of assembly)	5%	(6:4)	8%	(5:5)	5.1
COMMERCIAL/RETAILS						
Super Regional Shopping Center (More than 80 acres, more than	35/1000 sq. ft.,c 400/acre*	4%	(7:3)	10%	(5:5)	
800,000 sq. ft., w/usually 3+						
major stores) Regional Shopping Center[54:35:11]	50/1000 sq. ft., c 500/acre*		(7.2)	~	(e. e.)	
(40-80acres, 400,000-800,000	307 1000 Sq. 1t., 300/acre	4%	(7:3)	9%	(5:5)	5.2
sq. ft., w/usually 2 + major stores) Community Shopping Center[47:31:22]	80/1000 sq. ft., 700/acre* **	4%	(6:4)	100/	(E.F)	
(15-40 acres, 125,000-400,000 sq. ft.,		470	(0.4)	10%	(5:5)	3.6
w/usually 1 major store, detached restaurant(s), grocery and drugstore)						
Neighborhood Shopping Center (Less than 15 acres, less than	120/1000 sq. ft., 1200/acre* **	4%	(6:4)	10%	(5:5)	
125,000 sq. ft., w/usually grocery						
& drugstore, cleaners, beauty & barber shop, & fast food services)						
Commercial Shops [45:40:15]						
Specialty Retail/Strip Commercial Electronics Superstore	40/1000 sq. ft., 400/acre* 50/1000 sq. ft**	3%	(6:4)	9%	(5:5)	4.3
Factory Outlet	40/1000 sq. ft. * *	39%	(7:3)	10% 9%	(5:5) (5:5)	
Supermarket Drugstore	150/1000 sq. ft., 2000/acre* ** 90/1000 sq. ft. **	4% 4%	(7:3) (6:4)	10%	(5:5)	
Convenience Market (15-16 hours) Convenience Market (24 hours)	500/1000 sq. ft. * *	8%	(5:5)	10% 8%	(5:5) (5:5)	
Convenience Market (24 nours) Convenience Market (w/gasoline pumps)	700/1000 sq. ft. ** 850/1000 sq. ft., 550/vehicle fueling space **	9% 6%	(5:5) (5:5)	7% 7%	(5:5) (5:5)	
Discount Club Discount Store	60/1000 sq. ft., 600/acre* **	1%	(7:3)	9%	(5.5)	
Furniture Store	60/1000 sq. ft., 600/acre** 6/1000 sq. ft., 100/acre**	3% 4%	(6:4) (7:3)	8% 9%	(5:5) (5:5)	
Lumber Store Home Improvement Superstore	30/1000 sq. ft., 150/acre**	7%	(6:4)	9%	(5:5)	
Hardware/Paint Store	40/1000 sq. ft. ** 60/1000 sq. ft., 600/acre **	5% 2%	(6:4) (6:4)	8% 9%	(5:5) (5:5)	
Garden Nursery Mixed Use: Commercial (w/supermarket)/Residential	40/1000 sq. ft., 90/acre**	3%	(6:4)	10%	(5:5)	
Windo Oser Commission (W/Supermarkety/Residential	(110/1000 sq. ft., 2000/acre* (commercial only) 5/dwelling unit, 200/acre* (residential only)	3% 9%	(6:4) (3:7)	9% 13%	(5:5) (6:4)	
DUCATION					• • •	
University (4 years)	2.4/student, 100 acre*	10%	(8:2)	9%	(3:7)	8.9
Junior College (2 years)[92:7:1] High School[75:19:6]	1.2/student, 24/1000 sq. ft., 120/acre* ** 1.3/student, 15/1000 sq. ft., 60/acre* **	12% 20%	(8:2) (7:3)	9% 10%	(6:4) (4:6)	9.0
Middle/Junior High[63:25:12] Elementary	1.4/student, 12/1000 sq. ft. 50/acre**	30%	(6:4)	9%	(4:6)	4.8 5.0
Day Care	1.6/student, 14/1000 sq. ft., 90/acre* ** 5/child, 80/1000 sq. ft.**	32% 17%	(6:4) (5:5)	9% 18%	(4:6)	3.4
NANCIAL ^s [35:42:23]	•	11.73	,5.0,	1070	(5:5)	3.7
Bank (Walk-In only)	150/1000 sq. ft., 1000/acre* **	4%	(7:3)	8%	(4:6)	3.4
with Drive-Through Drive-Through only	200/1000 sq. ft., 1500/acre* 250 (125 one-way)/lane*	5%	(6:4)	10%	(5:5)	
Savings & Loan	60/1000 sq. ft., 600/acre**	3% 2%	(5:5)	13% 9%	(5:5)	
Drive-Through only	100 (50 one-way)/lane * *	4%		15%		
DSPITAL [73:25:2] General	20/had 25/1000 4- 250/					8.3
Convalescent/Nursing	20/bed, 25/1000 sq. ft., 250/acre* 3/bed**	8% 7%	(7:3) (6:4)	10% 7%	(4:6) (4:6)	
IDUSTRIAL			,,	•,,,		
Industrial/Business Park (commercial included) [79:19:2]	16/1000 sq. ft., 200/acre* **	12%	(8:2)	12%	(2:8)	9.0
Industrial Park (no commercial) Industrial Plant (multiple shifts)[92:5:3]	8/1000 sq. ft., 90/acre** 10/1000 sq. ft., 120/acre*	11% 14%	(9:1)	12%	(2:8)	
Manufacturing/Assembly	4/1000 sq. ft., 50/acre**	19%	(8:2) (9:1)		(3:7) (2:8)	11.7
Warehousing Storage	5/1000 sq. ft., 60/acre** 2/1000 sq. ft., 0.2/vault, 30/acre*	13% 6%	(7:3) (5:5)	15%	(4:6) (5:5)	
Science Research & Development Landfill & Recycling Center	8/1000 sq. ft., 80/acre* 6/acre	16% 11%	(9:1) (5:5)		(1:9)	

MEMBER AGENCIES: Cities of Carlsbad, Chula Vista, Coronado, Del Mar, El Cajon, Encinitas, Escondido, Imperial Beach, La Mesa, Lemon Grove, National City, Oceanside, Poway, San Diego, San Marcos, Santee, Solana Beach, Vista and County of San Diego.

ADVISORY/LIAISON MEMBERS: California

	TRIP CATEGORIES [PRIMARY:DIVERTED:PASS-BY]P	ESTIMATED WEEKDAY VEHICLE TRIP GENERATION RATE (DRIVEWAY)	HIGHEST Between 6	PEAK HOUR ::00-9:30 A.M.	% (plus IN Between 3:	:OUT ratio) 00-6:30 P.M.	TRIP LENG
JBRARY	[44:44:12]						
		50/1000 sq. ft., 400/acre**	2%	(7:3)	10%	(5:5)	3.9
ODGING	[58:38:4]					(=,	3.5
Hotel (w/convention facilities Motel	/restaurant)	10/occupied room, 300/acre	6%	(6:4)			7.6
Resort Hotel		9/occupied room, 200/acre*	8%		8% 9%		
Business Hotel		8/occupied room, 100/acre* 7/occupied room**	5%	(6:4)	7%		
AUTADY		770ccapied room -	8%	(4:6)	9%		
MLITART	[82:16:2]	2.5/military & civilian personnel*	9%	(9:1)	100/	(n. e)	
FFICE		•	3/0	(9.1)	10%	(2:8)	11.2
Standard Commercial Office	e[77:19:4]	20/1000 sq. ft., o 300/acre*					
		20/1000 sq. 1t.,- 300/acre+	14%	(9:1)	13%	(2:8)	8.8
(more than 100,000 sq.	cial Office	17/1000 sq. ft., o 600/acre*	13%	(9:1)	4404	42.00	
Office Park (400,000 + sq	. ft.)	12/1000	1376	(3.1)	14%	(2:8)	10.0
Single Tenant Office		12/1000 sq.ft., 200/acre* ** 14/1000 sq. ft., 180/acre*	13%	(9:1)	13%	(2:8)	
Corporate Headquarters		7/1000 sq. ft., 180/acre*	15%		15%	(2:8)	8.8
Post Office	[50:34:16]	30/1000 sq. ft.**	17%		16%	(1:9)	5.0
Central/Walk-In Only			9%	(9:1)	12%	(3:7)	6.0
Community (not includi	ng mail drop lane)	90/1000 sq. ft. **	5%		7%		
Community (w/mail dro	p lane)	200/1000 sq. ft., 1300/acre*	6%	(6:4)	9%	(5:5)	
Mail Drop Lane only		300/1000 sq. ft., 2000/acre* 1500 (750 one-way)/lane*	7%	(5:5)	10%	(5:5)	
Department of Motor Ve	hicles	180/1000 sq. ft., 900/acre**	7%	(5:5)	12%	(5:5)	
wedical-Dental	[60:30:10]	50/1000 sq. ft., 500/acre*	6% 6%	(6:4) (8:2)	10%	(4:6)	
ARKS	[66:28:6]	• •	0%	(8:2)	11%	(3:7)	6.4
City (developed w/meeting	g rooms and sports facilities)	50/acre*	4%		8%		E 4
Regional (developed)		20/acre*	13%	(5:5)	9%	(5:5)	5.4
Neighborhood/County (unde	eveloped)	5/acre (add for specific sport uses), 6/picpic cite* **			•		
State (average 1000 acres) Amusement (Theme)		racie, ro/picnic site**					
San Diego Zoo		80/acre, 130/acre (summer only) * *			m/	(C: 4)	
Sea World		115/acre*			6%	(6:4)	
		80/acre*					
CREATION							
Beach, Ocean or Bay	[52:39:9]	600/1000 ft. shoreline, 60/acre*					
Beach, Lake (fresh water) Bowling Center		50/1000 ft, shoreline, 5/acre*					6.3
Campground		30/1000 sq. ft., 300/acre, 30/lane **	7%	(7:3)	11%	(4:6)	
Golf Course		4/campsite**	4%	(1.0)	8%	(4.0)	
Driving Range only		7/acre, 40/hole, 700/course* ** 70/acre, 14/tee box*	7%	(8:2)	9%	(3:7)	
Marinas		4/berth, 20/acre* **	3%	(7:3)	9%	(5:5)	
Macquetball/Health Club	olf, video arcade, batting cage, etc.)	90/acre	3% 2%	(3:7)	7%	(6:4)	
Tennis Courts		30/1000 sq. ft., 300/acre, 40/court*	4%	(6:4)	6% 9%	(6:4)	
Sports Facilities		16/acre, 30/court**	5%	(0.1)	11%	(5:5)	
Outdoor Stadium		50/acre, 0.2/seat*				(0.0)	
Indoor Arena Racetrack		30/acre, 0.1/seat*					
Theaters (multiplex w/matin	ee) [66:17:17]	40/acre, 0.6 seat*					
		80/1000 sq. ft., 1.8/seat, 360/screen*	1/3%		8%	(6:4)	6.1
SIDENTIAL	[86:11:3]				۵0	(0.4)	6.1
state, orban of Rufal	(2011110)	12/dwelling unit *R					7.9
(average 1-2 DU/acre) Single Family Detached		•	8%	(3:7)	10%	(7:3)	
(average 3-6 DU/acre)		10/dwelling unit *R	8%	(3:7)	4007	~ ~	
Condominium		0// "	ω,	(3.7)	10%	(7:3)	
(or any multi-family 6-20 [DU/acre)	8/dwelling unit * ^R	8%	(2:8)	10%	(7:3)	
partment		6/dwelling unit *R			.0.0	,	
(or any multi-family units	more than 20 DU/acre)	or attorning arms	8%	(2:8)	9%	(7:3)	
lilitary Housing (off-base, mu (less than 6 DU/acre)	lti-family)						
(6-20 DU/acre)		8/dwelling unit	7%	(3:7)	69 /	(C. 4)	
lobile Home		6/dwelling unit	7%	(3:7)		(6:4) (6:4)	
Family		5/dwelling unit, 40/acre*		(,	370	(0.4)	
Adults Only		3/dwelling unit, 20/acre*	8%	(3:7)	11%	(6:4)	
etirement Community		4/dwelling unit * *	9%	(3:7)		(6:4)	
ongregate Care Facility		2.5/dwelling unit**	5% 4%	(4:6) (6:4)		(6:4) (6:5)	
TAURANTS	[51:37:12]		-170	()	0%	(5:5)	
uanty	[51.57.12]	100/1000 sq. ft., 3/seat, 500/acre* **					4.7
t-down, high turnover		160/1000 sq. ft., 3/seat, 500/acre* ** 160/1000 sq. ft., 6/seat, 1000/acre* **	1%	(6:4)		(7:3)	7.,
ist Food (w/drive-through) ist Food (without drive-throu	rah)	650/1000 sq. ft., 20/seat, 3000/acre* **	8% 7%	(5:5) (5:5)		(6:4)	
elicatessen (7am-4pm)	ייפי	/00/1000 sq. ft. * *	7% 5%	(5:5) (6:4)		(5:5) (5:5)	
		150/1000 sq. ft., 11/seat*	9%	(6:4)		(5:5) (3:7)	
NSPORTATION					3/6	(0.7)	
is Depot		25/1000 sq. ft. **					
uck Terminal		10/1000 sq. ft., 7/bay, 80/acre**	· · · ·	(4.0)			
aterport/Marine Terminal	arking)	1/U/berth, 12/acre**	9%	(4:6)	8%	(5:5)	
ansit Station (Light Rail w/p irk & Ride Lots	arking)	300/acre, 21/2/parking space (4/occupied) * *	14%	(7:3)	150/	(2.7)	
1100 2023		400/acre (600/paved acre),		(7:3)		(3:7) (3:7)	
		5/parking space (8/occupied) * * *			.570	(~.,,	

Other sources: ITE Trip Generation Report [6th Edition]. Trip Generation Rates (other agencies and publications), various SANDAG & CALTRANS studies, reports and estimates. (draft SANDAG Analysis of Trip Diversion, revised November, 1990):
PRIMARY - one trip directly between origin and primary destination.
DIVERTED - linked trip (having one or more stops along the way to a primary destination.
PASS-BY - undiverted or diverted < 1 mile.

1 Trip lengths are average weighted for all trips to and from general land use site. (All trips system-wide average length = 6,9 miles)

Fitted curve equation: Ln(T) = 0.502 Ln(½ + 6.945 } T = total trips, x = 1,000 sq. ft.

Elthed curve equation: Ln(T) = 0.756 Ln(½ + 3.950 } T = total trips, x = 1,000 sq. ft.

^{*} Fitted curve equation: t = -2.169 Ln(d) + 12.85

t = trips/DU, d = density (DU/acre), DU = dwelling unit

^{*} Fitted curve equation: t = -2.169 Ln(d) + 12.85 t = trips/DU, d = dens

3 Suggested PASS-BY [undiverted or diverted < 1 mile] percentages for trip rate reductions only during P. M. peak period (based on combination of local data/review and Other sources **):

COMMERCIAL/RETAIL

Regional Shopping Center

Community " 37%

Neighborhood " 47%

Specialty Retail/Strip Commercial (other) 10%

Supermarket 47%

Supermarket 57%

Discount Club/Store 57%

Discount Club/Store 37%

AUTOMOBILE

Gasoline Station

ESTAIR/ANT

Quality 10%

Sit-down high turnover 20%

Fast Food 40%

⁷ Trip Reductions - in order to help promote regional "smart growth" policies, and acknowledge San Diego's expanding mass transit system, consider vehicle trip fate reductions (with proper documentation and necessary adjustments for peak periods). The following are some examples:

^[1] A 5% daily trip reduction for land uses with transit access or near transit stations accessible within 1/4 mile.

^[2] Up to 10% daily trip reduction for mixed-use developments where residential and commercial retail are combined (demonstrate mode split of walking trips to replace vehicular trips).

County of San Diego Level of Service Thresholds

the feature of a constitution of the part of the grand of

•

	JIH I KINI TJENIJ	B .		il wil	IVY THEALL OF WAY	_		PHOPEHIYIME						
	<u> </u>	EZIAYI		1.	navent D	-		PAIKWAY	<u> </u>	•	į	; ; ;	:	
	<u>~</u> [STIN" SHOULDEN	! -	NAVELED WAY	MEGIVE	INA.ELED WAY	Y SHOULDE				LEVEL OF SERVICE (LOS)	I- SEUVI	CE (LO	S)
	لـــا					•		1	Min.	· <		ບ	٥	ш
	7	70	Shoulder F	Parkway	Roadbed	WI	Min.curve	Max. grados	design spand (nph)	Free Ilow	Slaady	Stable	Approach unstable	Unstable
EXPITESSWAY Diction highway will only solice- man paint on on one of the one	34.	36.	<u>;</u>		126.	1 1	.0021	%9	55	<36,000	<54,000	<70.000	× 86,000	< 101,000
Processor Antenal Control of State of S	7	.96	ins.	.0.1	102′	122.	1200.	%9	55	<22,200	<37,000	<44,600	<50,000	<57,000
IAAJORI NOAD A tana dividud toad, access & paiking controlled as necessary	ż	24.	.6	.0	.82	.86	1200,	ž	55	<14,800	<24,700	. 29,600	<33,400	<37,900
COLLECTOR 4 Inim widhiddd toad	1.	24.	, 0	<u>.</u>		.4	100.	%.	K32 3	<13,700	<22,800	<27,400	<30,600	<34,200
LIGHT COLLECTOR	1	/ 15.	is s	10.	40.	.09	700,	%6	45	<1,900	<4,100	<7,100	<10,900	<16,200
RUINAL COLLECTOR 2 lane untilvided read, exter Th.W allows geater flexibility &	1	15.	200	22.	•	84.	500,	12%	40	<1,900	<4,100	<7,100	<10,900	<16,200
utyjano nutat Light COLLECTOR 2 Jano undyddod toad docusiad	!	12.	6	.01	40.	.09	900,	7.31	40	<1,900	<4,100	<7,100	<10,900	<16,200
HURAL RADDATANA 2 Jana undikididi fond appropriata only in rural mountain areas	1	15.		30.	.40.	.00	200,	15%	40	<1,900	<4,100	د7,100	<10,900	· <16,200
HECREATION PANKWAY Recraitional routes for travel pleasure purposes		15.	.0	30,	40.	100.	400.	12%	52	×1,900	<4,100	<7,100	<10.900	<16,200
	-					=	HON CINCULATION HOALIS	JI.AIION	HOALIS		1		In the second state	the sade circs b
	-	12.	0	E	40,	.09	300.	15%		<4,500	<u> </u>	pose is to serve abo	ulting forts, rol care	Levels of service are not applied to from Elichardon 103113 sain e men primary purpose is to serve aboding folis, not carry throughlastific. Levels
NESIDENTIAL COLLECTOR	1	2		2	1	56.	200,	¥51		×1,500	$\widetilde{}$	cernally apply to to	ads carrying illuous	n banic teleten m hon idad elassikealie
MESIDEHTIAL STREET	1	2	1	-			.000	1	16	200				

A-34

9
.
• •

County of San Diego Draft Guidelines for Determining Significance

and and the control of the control o

COUNTY OF SAN DIEGO

GUIDELINES FOR DETERMINING SIGNIFICANCE

TRANSPORTATION AND TRAFFIC



LAND USE AND ENVIRONMENT GROUP

Department of Planning and Land Use Department of Public Works

September 26, 2006

3.4 Hazards to Pedestrians or Bicyclists

Increased traffic generated or redistributed by a proposed project may cause a significant traffic operational impact to pedestrians or bicyclists and result in potential hazards. These hazards can occur for a variety reasons including:

- A design feature or physical configurations on a road segment or at an intersection that may adversely affect the visibility of pedestrians or bicyclists to drivers entering and exiting the site, and the visibility of cars to pedestrians and bicyclists;
- High amount of pedestrian activity at the project access points.
- Precluding or substantially hindering of the provision of a planned bike lane or pedestrian facility on a roadway adjacent to the project site.
- The physical conditions of the project site and surrounding area, such as curves, slopes, walls, landscaping or other barriers may result in vehicle/pedestrian, vehicle/bicycle conflicts.
- The project may result in a substantial increase in pedestrian or bicycle activity without the presence of adequate facilities.

3.5 Parking Capacity

Typical adverse effects on parking occur when an adequate number of spaces are not incorporated in a project design. The regulations are intended to require adequate off-street parking and loading, thereby reducing traffic congestion, allowing more efficient utilization of on-street parking, promoting more efficient loading operations, and reducing the use of public streets for loading purposes. Additionally, the regulations are intended to minimize the secondary effects of vehicles. These may include vehicular noise or visual impacts from headlights and unscreened parked vehicles. Unscreened parked vehicles are a particular concern when parking adjoins or is adjacent to residential areas or preserve systems that are sensitive to noise and lighting.

4.0 GUIDELINES FOR DETERMINING IMPACT SIGNIFICANCE

This section provides guidance for evaluating adverse environmental effects a project may have on traffic. The guidelines for determining significance are organized into eight categories: road segments, intersections, ramps, congestion management plan, hazards due to an existing transportation design feature, hazards to pedestrians or bicyclists, parking capacity, and alternative transportation. A discussion of how to evaluate project and cumulative level impacts is also included in the Transportation and Traffic Report Format and Content Requirement.

4.1 Road Segments

Pursuant to the County's General Plan Public Facilities Element (PFE), new development must provide improvements or other measures to mitigate traffic impacts to avoid:

- (a) Reduction in Level of Service (LOS) below "C" for on-site Circulation Element roads;
- (b) Reduction in LOS below "D" for off-site and on-site abutting Circulation Element roads; and
- (c) "Significantly impacting congestion" on roads that operate at LOS "E" or "F". If impacts cannot be mitigated, the project will be denied unless a statement of overriding findings is made pursuant to the State CEQA Guidelines. The PFE, however, does not include specific guidelines/thresholds for determining the amount of additional traffic that would "significantly impact congestion" on such roads, as that phrase is used in item (c) above.

The County has created the following guidelines to evaluate likely traffic impacts of a proposed project for road segments and intersections serving that project site, for purposes of determining whether the development would "significantly impact congestion" on the referenced LOS E and F roads. The guidelines are summarized in Table 1. The thresholds in Table 1 are based upon average operating conditions on County roadways. It should be noted that these thresholds only establish general guidelines, and that the specific project location must be taken into account in conducting an analysis of traffic impact from new development.

On-site Circulation Element Roads

PFE, Transportation, Policy 1.1 states that "new development shall provide needed roadway expansion and improvements on-site to meet demand created by the development, and to maintain a Level of Service C on Circulation Element Roads during peak traffic hours". Pursuant to this policy, a significant traffic impact would result if:

The additional or redistributed ADT generated by the proposed land development project will cause on-site Circulation Element Roads to operate below LOS C during peak traffic hours except within the Otay Ranch project as defined in the Otay Subregional Plan Text, Volume 2. PFE, Implementation Measure 1.1.2.

Off-site Circulation Element Roads

PFE, Transportation, Policy 1.1 also states that "new development shall provide needed roadway expansion and improvements off-site to meet demand created

by the development, and to maintain a Level of Service D on Circulation Element Roads." "New development that would significantly impact congestion on roads operating at LOS E or F, either currently or as a result of the project, will be denied unless improvements are scheduled to improve the LOS to D or better or appropriate mitigation is provided." The PFE, however, does not specify what would significantly impact congestion or establish criteria for evaluating when increased traffic volumes would significantly impact congestion. The following significance guidelines provided are the County's preferred method for evaluating whether or not increased traffic volumes generated or redistributed from a proposed project will "significantly impact congestion" on County roads, operating at LOS E or F, either currently or as a result of the project.

Traffic volume increases from public or private projects that result in one or more of the following criteria will have a significant traffic volume or level of service traffic impact on a road segment, unless specific facts show that there are other circumstances that mitigate or avoid such impacts:

- The additional or redistributed ADT generated by the proposed project will significantly increase congestion on a Circulation Element Road or State Highway currently operating at LOS E or LOS F, or will cause a Circulation Element Road or State Highway to operate at a LOS E or LOS F as a result of the proposed project as identified in Table 1, or
- The additional or redistributed ADT generated by the proposed project will cause a residential street to exceed its design capacity.

Table 1

Measures of Significant Project Impacts to Congestion on Road Segments

Allowable Increases on Congested Road Segments

Level of service	Two-lane road	Four-lane road	Six-lane road
LOS E	200 ADT	400 ADT	600 ADT
LOS F	100 ADT	200 ADT	300 ADT

Notes:

- 1. By adding proposed project trips to all other trips from a list of projects, this same table must be used to determine if total cumulative impacts are significant. If cumulative impacts are found to be significant, each project that contributes any trips must mitigate a share of the cumulative impacts.
- 2. The County may also determine impacts have occurred on roads even when a project's traffic or cumulative impacts do not trigger an unacceptable level of service, when such traffic uses a significant amount of remaining road capacity.

The first significance criterion listed in Table 1 addresses roadways presently operating at LOS E. Based on these criteria, an impact from new development on an LOS E road would be reached when the increase in average daily trips (ADT) on a two-lane road exceeds 200 ADT. Using SANDAG's "Brief Guide for Vehicular Traffic Generation Rates for the San Diego Region" for most discretionary projects this would generate less than 25 peak hour trips. On average, during peak hour conditions, this would be

only one additional car every 2.4 minutes. Therefore, the addition of 200 ADT, in most cases, would result in changes to traffic flow that would not be noticeable to the average driver and therefore would not constitute a significant impact on the roadway. Significance criteria were also established for four-lane and six-lane roads operating at LOS E and are based upon the above 24 hour ADT significance criterion established for two-lane roads. The two-lane road criterion was doubled to determine impacts to fourlane roads and tripled to determine impacts to six-lane roads. This was considered to be conservative since the 24 hour per lane road capacity for a 4-lane road is more than double that of a two-lane road and the per lane capacity of a six-lane road is more than triple that of the two-lane road. For LOS E roads, the additional significance criteria are 400 ADT for a four-lane road and 600 ADT for a six-lane road. Similar to criterion for two-lane roads, the 400 ADT for a 4-lane road and 600 ADT for a 6-lane road criteria would generate less than 25 per lane peak hour trips for most discretionary projects. On average, during peak hour conditions, this would be only one additional car per lane every 2.4 minutes. The addition of 200 ADT per lane (400 ADT for a 4 lane road or 600 ADT for a 6 lane road), in most cases, would result in changes to traffic flow that would not be noticeable to the average driver and therefore would not constitute a significant impact on the roadway. Road capacities based upon level of service for County roads (two-lane, four-lane and six-lane) are provided in Attachment A.

The second significance criteria listed in Table 1 addresses roadways presently operating at LOS F. Under LOS F congested conditions, small changes and disruptions to the traffic flow on County Circulation Element Roads can have a greater effect on traffic operations when compared to other LOS conditions. In order to better account for potential effects of increased traffic on LOS F roads more stringent significance criteria was established when compared to that for LOS E. Based on this guidance, an impact from new development on an LOS F road would be reached when the increase in average daily trips (ADT) on a two-lane road exceeds 100. Again, using SANDAG's "Brief Guide for Vehicular Traffic Generation Rates for the San Diego Region" for most discretionary projects this would generate less than 12.5 peak hour trips. On average, during peak hour conditions, this would be only one additional car every 4.8 minutes. The addition of 100 ADT, in most cases, would not be noticeable to the average driver and therefore would not constitute a significant impact on the roadway. The same approach used to determine significance criteria for four-lane and six-lane roads operating at LOS E was used to determine appropriate significance criteria for four-lane and six-lane roads operating at LOS F. Based on this approach, the significance criteria for a four-lane road (200 ADT) and for a six-lane road (300 ADT) would generate less than 12.5 per lane peak hour trips for most discretionary projects. On average, during peak hour conditions, this would be only one additional car per lane every 4.8 minutes. The addition of 100 per lane ADT (200 ADT for a 4-lane road and 300 ADT for a 6-lane road) would, in most cases, not be noticeable to the average driver and therefore would not constitute a significant impact on the roadway. In summary, under extremely congested LOS F conditions, small changes and disruptions to the traffic flow can significantly affect traffic operations and additional project traffic can increase the likelihood or frequency of these events. Therefore, the LOS F ADT significance criteria was set at 100 ADT (50% of the LOS E threshold) to provide a higher level of assurance

that the traffic allowed under the threshold would not significantly impact traffic operation on the road segment.

Non-Circulation Element Residential Streets

Levels of service are not applied to residential streets since their primary purpose is to serve abutting lots and not to carry through traffic, however, for projects that will substantially increase traffic volumes on residential streets, a comparison of the traffic volumes on the residential streets with the recommended design capacity must be provided. Recommended design capacities for residential non-Circulation Element streets are provided in the San Diego County Public and Private Road Standards. Traffic volume that exceeds the design capacity on residential streets may impact residences and should be analyzed on a case-by-case basis.

4.2 Intersections

This section provides guidance for evaluating adverse environmental effects a project may have on signalized and unsignalized intersections.

4.2.1 Signalized

Traffic volume increases from public or private projects that result in one or more of the following criteria will have a significant traffic volume or level of service traffic impact on a road segment:

 The additional or redistributed ADT generated by the proposed project will significantly increase congestion on a signalized intersection currently operating at LOS E or LOS F, or will cause a signalized intersection to operate at a LOS E or LOS F as identified in Table 2.

Table 2
Measures of Significant Project Impacts to Congestion on Intersections
Allowable Increases on Congested Intersections

Level of service	Signalized	Unsignalized
LOS E	Delay of 2 seconds	20 peak hour trips on a critical movement
LOS F	Delay of 1 second, or 5 peak hour trips on a critical movement	5 peak hour trips on a critical movement

Notes:

- 1. A critical movement is one that is experiencing excessive queues.
- By adding proposed project trips to all other trips from a list of projects, these same tables are used to determine if total cumulative impacts are significant. If cumulative impacts are found to be significant, each project that contributes any trips must mitigate a share of the cumulative impacts.
- 3. The County may also determine impacts have occurred on roads even when a project's traffic or cumulative impacts do not trigger an unacceptable level of service, when such traffic uses a significant amount of remaining road capacity.

The significance criterion for signalized intersections identified in Table 2 allows an increase in the overall delay at an intersection operating at LOS E of two seconds. This is consistent with the capacity threshold contained in the SANDAG's CMP and guidelines established by the City of San Diego. A delay of two seconds is a small fraction of the typical cycle length for a signalized intersection that ranges between 60 and 120 seconds. The likelihood of increased queues forming due to the additional two seconds of delay is low. Therefore, an increased wait time of two seconds, on average, would result in changes to traffic flow that would not be noticeable to the average driver. Therefore the significance guideline for intersections operating at LOS E is 2 seconds.

The primary significance criterion for signalized intersections operating at LOS F conditions was based upon increased delay at the intersection. Under LOS F congested conditions, small changes and disruptions to the traffic flow to signalized intersections can have a greater effect on overall intersection operations when compared to other LOS conditions. In order to better account for potential effects of increased traffic at signalized intersections operating at LOS F, a more stringent guideline was established when compared to signalized intersection operating at LOS E. A significance guideline of an increased delay of 1 second was established for signalized intersections operating at LOS F. An increase in the overall delay at an intersection of one second, on average, would result in changes to traffic flow that would not be noticeable to the average driver. Therefore the significance guideline for intersections operating at LOS F is 1 second.

Signalized intersections operating at LOS F also have the potential for substantial queuing at specific turning movements that may detrimentally effect overall intersection and/or road segment operations. Thus, an increase of peak hour trips to a critical move was also established as a secondary significance criterion for signalized intersections. A critical movement would be a movement or a lane at an intersection that is experiencing queuing or substantial delay and is affecting the overall operation of the intersection. The increase in peak hour trips to a critical move is a measurement of how many cars can be added to an existing queue. The addition of five trips (peak hour) per critical movement will normally be considered a significant impact. This significance criterion was selected because the five additional trips spread out over the peak hour would not significantly increase the length of an existing queue and would not be noticeable to the average driver (one trip every 12 minutes or 720 seconds). For LOS E intersections, the 5 peak hour trips to a critical movement would not be noticeable to the average driver since the one additional trip during the 12 minute interval on average would clear the traffic signal cycles well within the 12 minute period. It should also be noted that if the 5 additional peak hour trips arrived at the same time these trips would also clear the traffic cycle and existing queue lengths would be re-established.

4.2.2 Unsignalized

The operating parameters and conditions for unsignalized intersections differ dramatically from those of signalized intersections. Very small volume increases on one leg or turn and/or through movement of an unsignalized intersection can substantially affect the calculated delay for the entire intersection. Significance criteria for unsignalized intersections are based upon a minimum number of trips added to a critical movement at an unsignalized intersection.

Traffic volume increases from public or private projects that result in one or more of the following criteria will have a significant traffic volume or level of service traffic impact on a road segment:

- The additional or redistributed ADT generated by the proposed project will add 20 or more peak hour trips to a critical movement of an unsignalized intersection, and cause an unsignalized intersection to operate below LOS D, or
- The additional or redistributed ADT generated by the proposed project will add 20 or more peak hour trips to a critical movement of an unsignalized intersection currently operating at LOS E, or
- The additional or redistributed ADT generated by the proposed project will add 5 or more peak hour trips to a critical movement of an unsignalized intersection, and cause the unsignalized intersection to operate at LOS F, or
- The additional or redistributed ADT generated by the proposed project will add 5 or more peak hour trips to a critical movement of an unsignalized intersection currently operating at LOS F, or
- Based upon an evaluation of existing accident rates, the signal priority list, intersection geometrics, proximity of adjacent driveways, sight distance or other factors, it is found that the generation rate is less than those specified above, and would significantly impact the operations of the intersection.

The significance guidelines for unsignalized intersections identify a minimum number of trips added to a critical movement at an unsignalized intersection. Since the operations of unsignalized intersections under congested conditions are heavily influenced by traffic volume increases on critical moves, the significance guidelines for unsignalized intersections were based upon the number of trips added to a critical movement. This guideline directly relates to the number of vehicles that can be added to an existing queue that forms at the intersection. A significance criteria of twenty trips (peak hour) per critical movement was used for LOS E conditions. Although delays drivers experience under LOS E condition may be noticeable, they are not yet considered

unacceptable. The twenty trips spread out over the peak hour would not likely cause the intersection delay or existing queue lengths to become unacceptable. The twenty trips (peak hour) would not be noticeable to the average driver. A significance guideline of five trips (peak hour) per critical movement was used for LOS F conditions. The five trips spread out over the peak hour would not significantly increase the length of an existing queue and would not be noticeable to the average driver.

The operations of unsignalized intersections under congested conditions are heavily influenced by traffic volume increases on critical moves. Therefore, the significance guidelines for unsignalized intersections are based upon the number of peak hour trips added to a critical movement at that intersection. This guideline examines the number of vehicles that may be added to an existing queue that forms at the intersection by the additional traffic generated by a project. In LOS E situations, the delays that drivers experience are noticeable, but are not considered excessive. A peak hour increase of twenty trips to the critical movement of an unsignalized intersection would be, on average, one additional car every 3.0 minutes or 180 seconds. Assuming the average wait time for a vehicle in the critical movement queue is less than 3.0 minutes, which is typical for LOS E condition, this would not be noticeable to the average driver and would not be considered a significant impact.

For LOS F conditions, a significance threshold of five trips (peak hour) per critical movement was used. The five trips spread out over the peak hour would not significantly increase the length of an existing queue and would not be noticeable to the average driver. Five trips spread out over an hour would be one car every 12 minutes. This typically exceeds the average wait time in the queue and would not be noticeable to the average driver.

4.3 Ramps

Additional or redistributed ADT generated by the proposed project may significantly increase congestion at a freeway ramp. Caltrans' "Guide for the Preparation of Traffic Impact Studies" states that an operational analysis based upon Caltrans Highway Design Manual should be used in the evaluation of the ramps and in the preparation of the operational analysis that Caltrans' Ramp Metering Guidelines should be used. However, specific criteria for the determination of an impact at a ramp are not provided in the above documents.

The CMP includes guidelines for the determination of traffic impacts at a ramp. These guidelines are summarized in Table 3. Table 3 may be used as a guide in determining significant increases in congestion on ramps and for addressing congestion management plan impacts. Other factors that may be considered include ramp metering, location (rural vs. urban), ramp design, and the proximity of adjacent intersections. Coordination with Caltrans and the local jurisdiction should be conducted to determine appropriate impact criteria for the specific ramps being assessed.

4.4 Congestion Management Plan

Projects that generate over 2,400 ADT or 200 peak hour trips, must comply with the traffic study requirements of SANDAG's Congestion Management Plan. Trip distributions for these projects must also use the current regional computer traffic model. Projects that must prepare a CMP analysis should also follow the CMP traffic impact analysis guidelines. A summary of these guidelines is provided in Table 3.

Table 3

Measure of Significant Project Traffic Impacts for Circulation Element Roads, Signalized Intersections, and Ramps

			Α	llowable Cl	hange Due to Proje	ect Impact	
Level of Service With	Fre	eways		adway ments*	Intersections**	Ramps***	Ramps with >15 min. delay
Project	V/C	Speed (mph)	V/C	Speed (mph)	Delay (sec.)	Delay (min.)	Delay (min.)
E&F	0.01	1	0.02	1	2		. 2

For County arterials, which are not identified in SANDAG's Regional Transportation Plan and Congestion Management Plan as regionally significant arterials, significance may be measured based upon an increase in average daily trips. The allowable change in ADT due to project impacts in this instance would be identified in Table 1.

** Signalized intersections.

*** See the Transportation and Traffic Report Format and Content Requirements for guidance on ramp metering analysis.

KEY

V/C = Volume to Capacity ratio

Speed = Speed measured in miles per hour

Delay = Average stopped delay per vehicle measured in seconds, or minutes

LOS = Level of Service ADT = Average Daily Trips

4.5 Hazards Due to an Existing Transportation Design Feature

Many roadways and intersections in the County were designed and constructed prior to the adoption of current road design standards. The design of the roadways and intersections, while adequate for existing traffic volumes, may pose an increased risk if traffic volumes substantially increase along the road segment or at the intersection as a result of the proposed project. Increased traffic generated or redistributed by a proposed project may cause a significant traffic operational impact to an existing transportation design feature. Therefore, it is necessary to evaluate potential hazards to an existing transportation design feature.

The determination of significant hazards to an existing transportation design feature shall be on a case-by-case basis, considering the following factors:

- Design features/physical configurations of access roads may adversely affect the safe transport of vehicles along the roadway.
- The percentage or magnitude of increased traffic on the road due to the proposed project may affect the safety of the roadway.
- The physical conditions of the project site and surrounding area, such as curves, slopes, walls, landscaping or other barriers, may result in vehicle conflicts with other vehicles or stationary objects.
- The project does not conform to the requirements of the private or public road standards, as applicable.

4.6 <u>Hazards to Pedestrians or Bicyclists</u>

Many roadways and intersections in the County do not have pedestrian or bicycle facilities. The roadways and intersections, while adequate for current conditions, may pose an increased risk if traffic volumes, pedestrian volumes, or bicycle volumes substantially increase along the road segment or at the intersection, as a result of the proposed project. Increased traffic generated or redistributed by a proposed project may cause a significant traffic operational impact to pedestrians or bicyclists. Therefore, it is necessary to evaluate potential hazards to pedestrians or bicyclists.

The determination of significant hazards to pedestrians or bicyclists shall be on a case-by-case basis, considering the following factors:

- Design features/physical configurations on a road segment or at an intersection that may adversely affect the visibility of pedestrians or bicyclists to drivers entering and exiting the site, and the visibility of cars to pedestrians and bicyclists.
- The amount of pedestrian activity at the project access points may adversely affect pedestrian safety.
- The project may result in the preclusion or substantial hindrance of the provision of a planned bike lane or pedestrian facility on a roadway adjacent to the project site.
- The percentage or magnitude of increased traffic on the road due to the proposed project may adversely affect pedestrian and bicycle safety.
- The physical conditions of the project site and surrounding area, such as curves, slopes, walls, landscaping or other barriers may result in vehicle/pedestrian, vehicle/bicycle conflicts.

- The project does not conform to the requirements of the private or public road standards, as applicable.
- The project may result in a substantial increase in pedestrian or bicycle activity without the presence of adequate facilities.

4.7 Parking Capacity

The following significance guideline will be considered a potentially significant parking capacity impact.

 The project cannot demonstrate compliance with the standards set forth by the County of San Diego Zoning Ordinance (Sections 6750-6799) and the County of San Diego Off-Street Parking Design Manual.

Urban planners set minimum parking requirements for every land use type. These requirements are designed to ensure that land developers will provide enough spaces to satisfy the peak demand for parking to the subject use. The requirements are typically listed in a jurisdiction's zoning ordinance and this is the case in the County of San Diego, with a supplemental Off-Street Parking Design Manual. The establishment of minimum standards in the Zoning Ordinance is primarily based on surveys of nearby cities and consultation with professional traffic engineering association publications, such as the Institute of Transportation Engineers (ITE) handbooks. adequate number of peak hour parking spaces for each use is not an exact science and there is no uniform formula or origin of minimum parking requirements (Shoup, 1999). Instead minimum parking standards have been developed through a trial and error process to identify the appropriate minimum standards for the subject jurisdictions. The County of San Diego practiced this same technique when parking minimum parking standards were last updated in 1985. Based on the continued fine-tuning of minimum parking standards, non-compliance with the County of San Diego Zoning Ordinance and Off-Street Parking Design Manual will result in a potentially significant impact.

4.8 Alternative Transportation

Alternative transportation is addressed in the County's General Plan Public Facilities Element (PFE). The County's stated objective for alternative transportation is addressed by the PFE, Objective 4. Objective 4 asks for a "Reduction in the demand on the road system through increased public use of alternate forms of transportation and other means." Pursuant to Objective 4, Policies 4.1 – 4.4 establish a means for the County to meet the objective. As such, if a proposed project is not in conformance with the applicable alternative transportation policies in the PFE, a significant conflict with the County's alternative transportation policies may occur.

Excerpts from the Public Facility Element

and their consists of the bottom was a consist. ·

Part XII Public Facility Element

San Diego County General Plan

Adopted March 13, 1991 GPA 90-FE Amended June 10, 1992 GPA92-FE1

Section	1 - Introduction	XII-1-1
Section	2 - Coordination Among Facility	
	Planning, Financing Programs and	d
	Land Use Planning	XII-2-
Section	3 - Parks and Recreation	XII-3-1
Section	4 - Transportation	XII-4-1
Section	5 - Flood Control	XII-5-1
Section	6 - Solid Waste	XII-6-1
Section	7 - Law Enforcement	XII-7-1
Section	8 - Animal Control	XII-8-1
Section	9 - Libraries	XII-9-1
section	U - Schools	.XII-10-1
Section 1	1 - Fire Protection and	
	Emergency Services	. XII-11-1
Section 1	2 - Wastewater	. XII-12-1
Section 1	3 - Water Provision Systems	. XII-13-1
Section 1	4 - Child Care	XII-14-1
Section 1	5 - Courts and Jails	.XII-15-1
Section 1	6 - Social Services	.XII-16-1
Section 1	7 - Health	. XII-17-1
Section 1	8 - Senior Services	. XII-18-1
Section 1	9 - County Administration	.XII-19-1
Section 2	0 - Facilities Located in City Soneres	.XII-20-1

This Element was partially funded through the Community Development Block Grant program

1. Increases in the amount of automobile use have resulted in increased congestion on the region's roadways.

Discussion: The dramatic rise in automobile use has far surpassed the ability of the County and other jurisdictions to upgrade and maintain the highway and road system. As the number of vehicles on the roadways has increased, the expansion of existing roadways and the construction of new roadways has not kept pace. Between 1978 and 1988, automobile registrations increased by 64% while increases in local street and road mileage only rose by 16%. As a result, certain roadways are functioning at a Level of Service "E" or "F" on a routine basis.

A LOS "C", which allows for stable traffic flow with room to maneuver, is a generally accepted level to strive for in new development. At this level, traffic generally flows smoothly, although freedom to maneuver within the roadway is somewhat restricted and lane changes require additional care.

However, there are some cases where development cannot achieve a LOS "C" on off-site roadways. For instance, there are areas where the existing development pattern precludes the addition of lanes or other mitigation or when the community is opposed to certain improvements to maintain a LOS "C". Additionally, there are existing roadways in the County that are currently operating below a LOS "C". Such cases are currently exceptions and generally occur when there is insufficient right-of-way to expand or modify a roadway or when the existing development in the area has generated more traffic than anticipated. In these cases a Level of Service "D" is acceptable on off-site roadways. At this level, small increases in flow cause substantial deterioration in service. Freedom to maneuver is limited and minor incidents can cause substantial interruption in the traffic flow.

When the roadway system reaches a LOS "E" or "F", or new development would push it to LOS "E" or "F", new development should not be approved unless the project can mitigate the LOS "E" or contribute a fair share to a program to mitigate the project's impacts, unless a statement of overriding findings can be made.

In order to control the amount of traffic on the roadways, and subsequently the amount of congestion, it is necessary to apply the LOS measurement to all roads that are impacted by a proposed project. The effect of a project on the road system varies from project to project. Due to the size and type of project, the type and capacity of roads serving the project, the amount of traffic generated by the development and the existing development pattern, the impact will vary from one project to another. To apply a LOS standard to only major or larger capacity roads or to within a specified geographic distance of a project could result in an inadequate review of the impacts of a project and create the potential for increased congestion. Therefore, project impacts should be assessed on a case-by-case basis.

GOAL

A SAFE, CONVENIENT, AND ECONOMICAL INTEGRATED TRANSPORTATION SYSTEM INCLUDING A WIDE RANGE OF TRANSPORTATION MODES.

OBJECTIVE 1:

A Level of Service "C" or better on County Circulation Element roads.

<u>Policy 1.1</u>: New development shall provide needed roadway expansion and improvements on-site to meet the demand created by the development, and to maintain a Level of Service "C" on Circulation Element Roads during peak traffic hours. New development shall provide off-site improvements designed to contribute to the overall achievement of a Level of Service "D" on Circulation Element Roads.

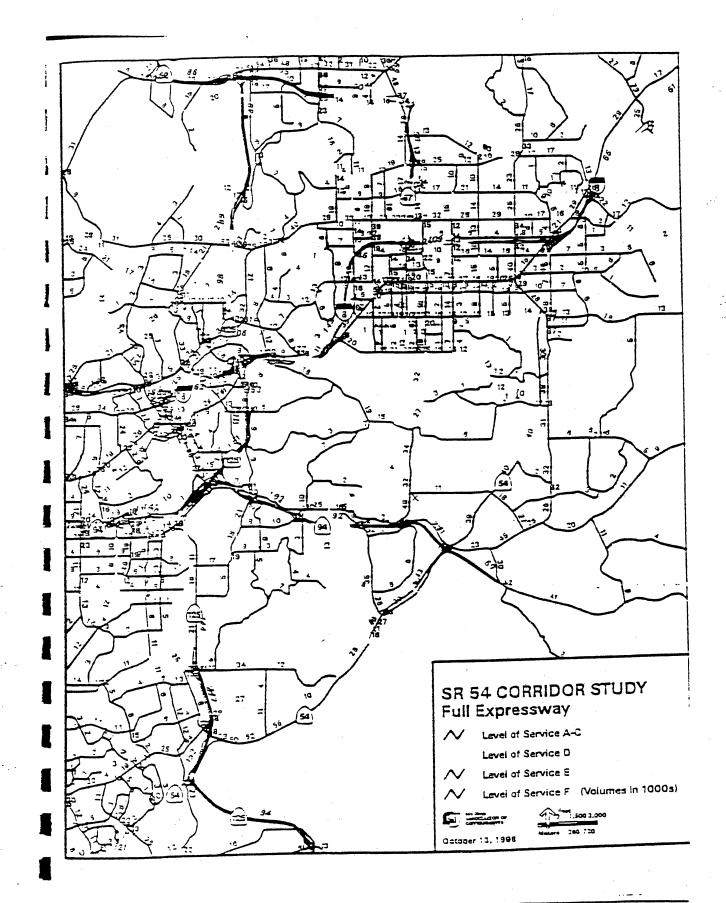
Implementation Measure 1.1.1: Review all development proposals to determine both their short-term and long-term impacts on the roadway system. The area of impact will be determined based on the size, type and location of the project; the traffic generated by the project; and the existing circulation and development pattern in the area. [DPW, DPLU]

Implementation Measure 1.1.2: Require, as a condition of approval of discretionary projects, improvements or other measures necessary to mitigate traffic impacts to avoid reduction in the existing Level of Service below "C" on on-site Circulation Element roads. [DPLU, DPW]

Implementation Measure 1.1.3: Require, as a condition of approval of discretionary projects which have a significant impact on roadways, improvements or other measures necessary to mitigate traffic impacts to avoid reduction in the existing Level of Service below "D" on off-site and on-site abutting Circulation Element roads. New development that would significantly impact congestion on roads at LOS "E" or "F", either currently or as a result of the project, will be denied unless improvements are scheduled to increase the LOS to "D" or better or appropriate mitigation is provided. Appropriate mitigation would include a fair share contribution in the form of road improvements or a fair share contribution to an established program or project. If impacts cannot be mitigated, the project will be denied unless a specific statement of overriding findings is made pursuant to Section 15091(b) and 15093 of the State CEQA Guidelines. [DPLU, DPW]

Implementation Measure 1.1.4: Whenever possible on development proposals, require that access to parcels adjacent to roads shown on the Circulation Element be limited to side streets in order to maintain through traffic flow. [DPW, DPLU]

Forecast Volumes



				•
				•
				a
				•
				<u>- </u>
			•	
:				
				•
				2
	•			
		·	•	
		·		
		·		
	•			

TIF FEE

当中,他是

County of San Diego TIF Program VALLE DE ORO FEE SCHEDULE

		APPLICABLE FEE	
LAND USE CATEGORY	Regional	Local	Total
Tennis Courts	\$3,625 / acre	\$5,023 / acre	\$8,649 / acre
Sports Facilities			
Outdoor Stadium	\$11,330 / acre	\$15,698 / acre	\$27,027 / acre
Indoor Arena	\$6,798 / acre	\$9,419 / acre	\$16,216 / acre
Racetrack	\$9,064 / acre	\$12,558 / acre	\$21,622 / acre
Theaters (multiplex w/matinee)	\$16,534 / ksf	\$22,908 / ksf	\$39,442 / ksf
ESIDENTIAL			
Estate, Urban or Rural (average 1-2 DU/acre)	\$2,898 / unit	\$4,016 / unit	\$6,914 / unit
Single Family Detached (average 3-6 DU/acre)	\$2,415 / unit	\$3,347 / unit	\$5,762 / unit
Condominium	\$1,932 / unit	\$2,677 / unit	\$4,609 / unit
(or any multi-family 6-20 DU/acre)			
Apartment (or any multi-family units more than 20 DU/acre)	\$1,449 / unit	\$2,008 / unit	\$3,457 _. / unit
Military Housing (off-base, multifamily)			
(less than 6 DU/acre)	\$1,932 / unit	\$2,677 / unit	\$4,609 / unit
(6-20 DU/acre)	\$1,449 / unit	\$2,008 / unit	\$3,457 / unit
Mobile Home			
Family	\$1,208 / unit	\$1,673 / unit	\$2,881 / unit
Adults Only	\$725 / unit	\$1,004 / unit	\$1,729 / unit
Retirement Community	\$966 / unit	\$1,339 / unit	\$2,305 / unit
Congregate Care Facility	\$605 / unit	\$838 / unit	\$1,443 / unit
ESTAURANT			
Quality	\$21,912 / ksf	\$30,360 / ksf	\$52,272 / ksf
Sit-down, high turnover	\$35,059 / ksf	\$48,576 / ksf	\$83,635 / ksf
Fast Food (w/drive-through)	\$142,428 / ksf	\$197,340 / ksf	\$339,768 / ksf
Fast Food (without drive-through)	\$153,384 / ksf	\$212,520 / ksf	\$365,904 / ksf
Delicatessen (7am-4pm)	\$32,868 / ksf	\$45,540 / ksf	\$78,408 / ksf
RANSPORTATION			
Bus Depot	\$6,225 / ksf	\$8,625 / ksf	\$14,850 / ksf
Truck Terminal	\$2,490 / ksf	\$3,450 / ksf	\$5,940 / ksf
Waterport/Marine Terminal	\$42,330 / berth	\$58,650 / berth	\$100,980 / berth
Transit Station (Light Rail w/parking)	\$74,700 / acre	\$103,500 / acre	\$178,200 / acre
Park & Ride Lots	\$99,600 / acre	\$138,000 / acre	\$237,600 / acre
Park & Ride Lots	\$99,600 / acre	\$138,000 / acre	\$237,600 / acre

APPENDIX B
➤Existing Conditions Worksheets

of Allenda State Commence of the Commence of t

Table B1

Existing Freeway Segment Volumes and Level of Service Summary

Route	Limits	# Lanes	Capacity	ADT	Peak Hour %	Direction Split	Truck Factor	v/c Ratio	LOS
SR94	Sweetwater Springs to Avocado	2	4,400	57,000	8.60%	55.0%	5.0%	0.643	С

Lanes - Number of lanes in one direction: HOV-High Occupancy Lanes

Capacity - Capacity in one direction

ADT - Average Daily Traffic

Peak Hour % - Percentage of average daily traffic occurring during the peak hour

Direction Split - Percentage of peak hour traffic traveling in peak direction.

Truck Factor - Truck/terrain factor to represent influence of heavy vehicles and/or grades.

Peak Hour Volume - Peak hour traffic in peak direction of travel/ For facilities with HOV lanes, ten percent is assumed to use HOV lanes.

v/c Ratio - Volume to Capacity Ratio

LOS - Caltrans District 11 procedure was used to estimate the freeway level of service. Designations vary from A to F, with four level of LOS F from F(0) to F(3).

			SHC	KIK	EPORT Site Info	rmation						
Seneral Information										Plud		
R Peaslee/V Ha				-	Intersect Area Typ Jurisdict	e e	,	e Dr/Avoo All other a unty of Sa	areas			
Agency or Co. Darnell & A Date Performed 02/09/2 Time Period AM Pea	2006				Analysis			Existir				
/olume and Timing Input		, .			14/5			NB			SB	
Toldine and The S		EB		LT	WB TH	RT	LT	TH	RT	LT	TH	RT
	LT	TH	RT	1	1	1	. 1	2	0	1	2	0
Number of Lanes	1	1	1		T	R	L	TR		L	TR	
ane Group	L	T	R	L 100	230	35	333	728	47	72	631	176
Volume (vph)	86	110	107	123		2	2	2	2	2	2	2
% Heavy Vehicles	2	2	2	2	2	0.84	0.84	0.84	0.84	0.84	0.84	0.84
PHF	0.84	0.84	0.84	0.84	0.84		0.04 A	A.	A	A	Α	Α
Pretimed/Actuated (P/A)	Α	Α	Α	Α	Α	Α .	<u> </u>	2.0	 ^`	2.0	2.0	1
Startup Lost Time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	-	2.0	2.0	1
Extension of Effective Green	2.0	2.0	2.0	2.0	2.0	2.0	2.0		+	3	3	+
Arrival Type	3	3	3	3	3	3	3	3	-	3.0	3.0	+
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	0	0	0	0
Ped/Bike/RTOR Volume	0	0	. 0	0	. 0	0	0	0	10	12.0	12.0	+
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	+ N	12.0 N	0	1 N
Parking/Grade/Parking	N	0	N.	N	0	N	N	0	N		+-	+
Parking/Grade/Farking Parking/Hour							1-	+	+-	0	0	+
Bus Stops/Hour	0	0	0	0	0	0	0	3.2	+	- °	3.2	十
Minimum Pedestrian Time		3.2			3.2	<u> </u>				Thru & R1		08
Phasing EB Only	WB On		03		04	Excl. G = 1		NB Onli $G = 7.0$		G = 31.5	G=	:
G = 10.0	G = 16.		=	G = Y =		Y = 4		Y = 0		Y = 4.5	Y =	:
Timing $Y = 4.5$	Y = 4.5	Y	=			1		Cycle Le	ength (C = 95.0		
Duration of Analysis (hrs) = Lane Group Capacity,).20	J Dola	y and	LOSI	Determ	nation		·				
Lane Group Capacity,	Contro	EB	y, and	1	WB			NB			SB	
	100	131	127	146	274	42	396	923		86	961	
Adjusted Flow Rate	102				324	550	438	1424		224	1137	
Lane Group Capacity	186	196	558	307				0.65	\dashv	0.38	0.85	1
v/c Ratio	0.55	0.67	0.23	0.48		0.08	0.90			0.13	0.33	
Green Ratio	0.11	0.11	0.35	0.17	0.17	0.35	0.25		-		29.5	
Uniform Delay d ₁	40.4	40.9	21.6	35.4	38.0	20.8	34.7			38.1		
	0.15	0.24	0.11	0.11	0.38	0.11	0.43			0.11		
Delay Factor k	3.4	8.5		1.2	18.3	0.1	21.9			1.1		
Incremental Delay d ₂	1.000					0 1.00	0 1.00	00 1.00	0	1.00		
PF Factor	43.8					20.8	3 56.	5 23.8	3	39.2		5
Control Delay		D 49.4	C	D	E	C	E	С		D	D	
Lane Group LOS	D	L		1-	46.		\dashv	33.	6		35.	.8
Approach Delay		38.			D	-	_	С			· D)
Approach LOS		D				Intor	section)
Intersection Delay		36.	8				M Version			Gene	rated: 2/1	5/2006

Copyright © 2005 University of Florida, All Rights Reserved



Silott Vehot	ιι											Pag	ge l of l
	•			S	HORT	REPO	RT				-		
General Inf							nformat	ion					
Agency or C Date Performed Period	med <i>02/</i>	/ Haskell/ & Associa 09/2006 Peak Hour	tes			Area Juriso	ection Type liction sis Year	Co	erte Dr/Av All othe cunty of S Exis	r areas San Die	•		
Jume and	d Timing Input												
			EB			WB			NB		T	SB	
		LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
mber of L		1	1	1	1	1	1	1	2	0	1	2	0
Lane Group		L	T	R	L	T	R	·L	TR		L	TR	
\ lume (vph		48	51	6	117	111	424	17	955	101	185	713	63
% Heavy Ve	ehicles	2	2	2	2	2	2	2	2	2	2	2	2
F		0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Retimed/Ac	tuated (P/A)	Α	A	Α	A	Α	Α	A	A	Α	A	A	A
Startup Lost	:Time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	 ``
E tension of	f Effective Green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Arrival Type		3	3	3	. 3	3	3	3	3		3	3	
it Extensi	on	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Fed/Bike/RT	OR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width		12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	 	12.0	12.0	
rking/Grad	de/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/Hou	r						1	1	 		+ '`-	 	
Bus Stops/H	lour	0	0	0	0	0	0	0	0		0	0	
Namimum Pe	destrian Time		3.2			3.2			3.2		 	3.2	
Phasing	EB Only	WB Only		03	0	4	Excl. L	eft	NB Only	Th	ru & RT	0	8
Tening	G = 15.0	G = 14.0			G =		G = 15	i.0 G	S = 5.0		= 34.0	G =	
	Y = 4.5 Analysis (hrs) = 0	Y = 4.5	Υ :	= '	Y =		Y = 4.5		= 0	Y =	4.5	Y =	
	up Capacity,		Dolay	andl	OS Da	4	4!	10	ycle Len	gth C =	101.0		
Lane Olor	up Capacity,		EB	, and L	-03 De	WB	ation	I	ND				
N -15 1 = 1	D :		T	T		Г	T		NB 1077			SB	
Adjusted Flo	w Rate	49	52	6	119	113	433	17			189	792	
Lane Group	Capacity	263	277	619	245	258	525	429	1350		263	1180	
v. Ratio		0.19	0.19	0.01	0.49	0.44	0.82	0.04	0.80		0.72	0.67	
Green Ratio		0.15	0.15	0.39	0.14	0.14	0.33	0.24	0.39	····	0.15	0.34	
Uniform Dala		1		1		·	7				 		

ne Group Capacit	y, Contro		y, anu	LOS D		nation				
		EB			WB			NB	1	SB
Adjusted Flow Rate	49	52	6	119	113	433	17	1077	189	792
Lane Group Capacity	263	277	619	245	258	525	429	1350	263	1180
v. Ratio	0.19	0.19	0.01	0.49	0.44	0.82	0.04	0.80	0.72	0.67
Gen Ratio	0.15	0.15	0.39	0.14	0.14	0.33	0.24	0.39	0.15	0.34
Uniform Delay d ₁	37.7	37.7	18.8	40.2	39.9	31.0	29.3	27.5	41.0	28.7
Day Factor k	0.11	0.11	0.11	0.11	0.11	0.36	0.11	0.34	0.28	0.24
Incremental Delay d ₂	0.3	0.3	0.0	1.5	1.2	10.4	0.0	3.5	9.1	1.5
Pactor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Control Delay	38.0	38.0	18.8	41.7	41.1	41.4	29.3	31.0	50.1	30.2
Lane Group LOS	D	D	В	D	D	D	С	С	D	С
Approach Delay		36.9			41.4			30.9		34.0
Approach LOS		D			D			С		С
resection Delay		34.7				Intersec	tion LOS	3		C

opyright © 2005 University of Florida, All Rights Reserved

i i di ana			Site Info	rmation				
neral Information	1 1. 11/10		Intersectio			Chase Ave/C	hase Ln	
alyst	V Haskell/J B Darnell & Ass		Jurisdiction			County of Sa	n Diego	
ency/Co.	02/09/2006	ociales, mo.	Analysis Y			Existing		
ate Performed	AM Peak							
nalysis Time Period								
oject Description 030204	-Fuerte Rancii		North/Sout	th Street:	Chase La	ne		
st/West Street: Chase Av	enue et West		Study Peri	od (hrs):	0.25			
ersection Orientation: Ea	3(-7700)							
ehicle Volumes and A	djustments	Eastbound				Westbound		
ajor Street	1	2	3		4	5	6	
ovement	<u> </u>	T	R		L	T	F	
	0	351	57		14	660	0.9	
olume (veh/h)	0.95	0.95	0.95		0.95	0.95	0.8	
eak-Hour Factor, PHF			60		14	694	. 1	
ourly Flow Rate, HFR reh/h)	0	369	00					
ercent Heavy Vehicles	2				2			
ledian Type				Undivided		T)
T Channelized			0			1		<u>, </u>
	0	1	0		1	1		R
anes Configuration	LTR				<u></u>	0		
Ipstream Signal		0						
		Northbound				Southboun	0	12
Minor Street	7	8	9		10	11 T		R
Movement		T	R		<u> L</u>			0
/ / / / / / / / / / / / / / / / / / /	59	0	7		0	0		.95
/olume (veh/h) Peak-Hour Factor, PHF	0.95	0.95	0.95		0.95	0.95		
Hourly Flow Rate, HFR	62	0	7		0	0 2		2
(veh/h) Percent Heavy Vehicles	2	2	2		2	0		
Percent Grade (%)		0						
	-	Y				N		
Flared Approach		1				0		
Storage	+		0					0
RT Channelized	0	1	0		0	1		0
Lanes	+ -	LTR				LTR		
Configuration	1							
Delay, Queue Length, an	d Level of Serv	Westbound		Northboun	ıd	5	Southbound	_
Approach	Eastbound		7	-8	9	10	11	
Movement	1	4	1-	LTR	+		LTR	
Lane Configuration	LTR	L	-	69			0	T
v (veh/h)	0	14			-			T
C (m) (veh/h)	901	1130		198			1	1
v/c	0.00	0.01		0.35			-	+
95% queue length	0.00	0.04		1.47				+
Control Delay (s/veh)	9.0	8.2		32.6			<u> </u>	+
	A	Α		D				
LOS				32.6				
Approach Delay (s/veh) Approach LOS			-	D				



General Information			Site Ir	formatio	n			
nalyst	V Haskel	I/J Bavos	Interse			Chase Ave	e/Chase Lr	7
agency/Co.		Associates, Inc.	Jurisdie				San Diego	
Date Performed	02/09/200		Analys		`	Existing		
nalysis Time Period	PM Peak					<u> </u>		
roject Description 030)204-Fuerte Ran	ch					· /	¥
ast/West Street: Chase			North/S	outh Street	: Chase L	ane		-1
ersection Orientation:	East-West		Study F	eriod (hrs):	0.25			
ehicle Volumes an	d Adiustmen	ts						
ajor Street	,	Eastbound				Westbour	nd	
vement	1	2	3		4 .	5		6 .
	L	Τ	R		L	Т.		R
<u>olume (veh/h)</u>	0	873	40		2	464		0
ak-Hour Factor, PHF	0.96	0.96	0.96		0.96	0.96		0.96
eurly Flow Rate, HFR veh/h)	0	909	41		2	483		0
rcent Heavy Vehicles	2	-			2			
dian Type			Undivided					
RT Channelized			0					0
nes	0	1	0		1	1		0
I nfiguration	LTR				L			TR
lpstream Signal		0				0		
nor Street		Northbound				Southbou	nd	4.
-evement	7	8	9		10	11		12
	L	T	R		L	Т		R
lume (veh/h)	25	0	4		0	0		0
eak-Hour Factor, PHF	0.96	0.96	0.96		0.96	0.96		0.96
lourly Flow Rate, HFR ■h/h)	26	0	4	·	0	0		0
rcent Heavy Vehicles	2	2	2		2	2		2
Percent Grade (%)		0				0		
red Approach		Υ				N		
Storage		1				0		
RT Channelized			0					0
nes	0	1	0		0	1		0
onfiguration		LTR				LTR		
elay, Queue Length, ar	nd Level of Sen	/ice						
proach	Eastbound	Westbound		Northbound	<u> </u>	S	outhbound	 :
lovement	1	4	7	8	9	10	11	12
e Configuration	LTR	Ĺ	<u> </u>	LTR	 		LTR	+
reh/h)	0	2		30			0	+
(m) (veh/h)	1080	723		133		<u> </u>	-	-
		<u> </u>						
/ la la	0.00	0.00		0.23				ļ
5% queue length	0.00	0.01		0.82		ļ		
Control Delay (s/veh)	8.3	10.0		41.4	·			
S	Α	Α		E	<u> </u>			
pproach Delay (s/veh)				41.4	4			
proach LOS				E		1		

Asproach LOS -right © 2005 University of Florida, All Rights Reserved

HCS+TM Version 5.

Generated: 2/15/2006 3:14 PM



	1440	-WAY STOP C						
eneral Information			Site Info	rmation				
	V Haskell/J E	Bavos	Intersection	n .		Chase Ave/Fu		
nalyst gency/Co.		sociates, Inc.	Jurisdictio			County of Sar	i Diego	
ate Performed	02/09/2006		Analysis Y	'ear		Existing		
nalysis Time Period	AM Peak		<u>.</u>					
roject Description 03020	4-Fuerte Ranch							
ast/West Street: Chase A	venue		North/Sou			ve		
tersection Orientation: Ea	ast-West		Study Per	iod (hrs):	0.25			
ehicle Volumes and		and the second second						
lajor Street	(u)uoumomo	Eastbound				Westbound		3
lovement	1	2	3		4	5	1	<u>२</u> २
IOVOINCIL	L	Т	R		L	T 684		`
olume (veh/h)		322	3		261	0.95	0.9	95 .
eak-Hour Factor, PHF	0.95	0.95	0.95	(0.95			
lourly Flow Rate, HFR veh/h)	0	338	3		274	720	-)
Percent Heavy Vehicles	0		0 Undivided					
Median Type				unaiviaed				2
RT Channelized			0			1		0
anes	0	1	0		1.	 		
Configuration			TR		L	0	_	
Jpstream Signal		0						
Minor Street		Northbound			- 10	Southbound 11		12
Movement	7	8	9 '		10	T		R
	L	· T	R		L	 '		
Volume (veh/h)	2		171		0.05	0.95		.95
Peak-Hour Factor, PHF	0.95	0.95	0.95		0.95		- 	
Hourly Flow Rate, HFR (veh/h)	2	0	180		0 -	0		0
Percent Heavy Vehicles	0	0	0		0	0		
Percent Grade (%)		. 0						
Flared Approach	·	N				N		
Storage		0				0		
RT Channelized	1		0					0
	0	0	0		0	0		0
Lanes Configuration		LR						
Delay, Queue Length, an	d Level of Serv	ice		``				
	Eastbound	Westbound		Northbound	d	So	outhbound	
Approach	1.	4	7	8	9	10	11	12
Movement	1	L	+	LR				
Lane Configuration		274	-	182	 			
v (veh/h)				658				
C (m) (veh/h)		1229	<u> </u>		-			
v/c		0.22		0.28	-			
95% queue length		0.85		1.13		_		+
Control Delay (s/veh)		8.8		12.5				+
LOS		Α		В				
Approach Delay (s/veh)				12.5				
Approach LOS				В				

Copyright © 2005 University of Florida, All Rights Reserved

HCS+TM Version 5.2



		WO-WAY STOP	CONTR	OF 201AI	IVIAKT				
General Information	n		Site I	nformati	ion				
Aalyst		II/J Bavos	Interse	ection		Chase Ave/	Fuerte Di	r	
Agency/Co.		& Associates, Inc.	Jurisdi	ction		County of S			
Date Performed	02/09/20		Analys	sis Year		Existing			
A alysis Time Period	PM Pear					:			
^o reject Description 03		nch							
East/West Street: Chas					et: <i>Fuerte l</i>	Drive			
n rsection Orientation:			Study F	Period (hrs	s): 0.25				
/enicle Volumes ar	nd Adjustmei	nts							
Major Street		Eastbound				Westbound		•	
dement	1	2	3		4	5		6	
	<u> </u>	Т	R		L	Т		R	
/olume (veh/h)		833	4		127	482			
k-Hour Factor, PHF	0.97	0.97	0.97	·	0.97	0.97		0.97	
veh/h)	0	858	4		130	496		0	
ent Heavy Vehicles	0				0				
√elian Type				Undivide	ed				
RT Channelized			0					0	
.a es	0	1	0		1	1		0	
Configuration			TR		L	T			
Jpstream Signal		0-				0			
di or Street		Northbound				Southbound	1		
ilc ement	nt 7		9		10	11	1	12	
-	L	Т	R		· L	Т		R	
/c me (veh/h)	5		172					M	
e k-Hour Factor, PHF	0.97	0.97	0.97	0.97		0.97		0.97	
fourly Flow Rate, HFR	5	0	177		0	0		0	
ent Heavy Vehicles	0	0	0		0	0		0	
'ercent Grade (%)		0				0			
lated Approach		N				N			
torage		0				0	_		
₹T Channelized			0			 		0	
.a es	0	0	0		0	0		0	
Configuration		LR				+		-	
elay, Queue Length, a	nd Level of Ser					1			
proach	Eastbound	Westbound	- 1	Northboun	ıd	Sol	ıthbound		
lovement	1	4	7	8	9	10	11	12	
ane Configuration	<u> </u>	L		LR	-	1 10 1	11	12	
(h/h)		130						 	
; (m) (veh/h)		789		182		+		<u> </u>	
		+		334			·		
5 queue length		0.16		0.54					
	·····	0.59		3.09					
control Delay (s/veh)		10.5		28.0					
Q		В		D					
pproach Delay (s/veh)				28.0					
pproach LOS				D					

pright © 2005 University of Florida, All Rights Reserved

HCS+TM Version 5.2

Generated: 2/15/2006 3:14 PM



		WAY STOP C	Site Info							
eneral Information						Fuerte Farms	/Damon			
alyst	R Peaslee/J L		Intersection Jurisdiction			County of Sa				
jency/Co.	Darnell & Ass	sociates, Inc.	Analysis			Existing				
ate Performed	02/09/2006		Hilalysis	Cui						
nalysis Time Period	AM Peak									
oject Description 030204	1-Fuerte Ranch		North/Sou	th Street:	Damon Lr	7				
st/West Street: Fuerte Fa	rms Ra		Study Period (hrs): 0.25							
ersection Orientation: No										
ehicle Volumes and A	Adjustments	N. Halanima		- T		Southbound				
ajor Street		Northbound 2	3	_	4	5		6		
ovement	<u> </u>	T	R		L	Т		R		
	9	4				4		50		
olume (veh/h)	0.50	0.50	0.50	(0.50	0.50	0.	50		
eak-Hour Factor, PHF ourly Flow Rate, HFR		0	4		0	0		0		
eh/h)	18	0			0					
ercent Heavy Vehicles	2			Undivided	U	<u> </u>				
ledian Type			1 0	Undivided		T		0		
T Channelized					0	1		0		
anes	0	1	0					TR		
Configuration	LT					0				
Ipstream Signal		0	<u> </u>		-	Westbound	1			
Minor Street		Eastbound	9		10	11		12		
Novement	7	8	R		L	Т		R		
	L	Т	2							
/olume (veh/h)	9	0.50	0.50		0.50	0.50	(0.50		
Peak-Hour Factor, PHF	0.50	0.50				8		0		
Hourly Flow Rate, HFR	0	8	80		18			0		
veh/h) Percent Heavy Vehicles	2	0	0		0	0				
Percent Grade (%)		0				. 0				
Flared Approach		N	·			N				
		0				0				
Storage	+		0					0		
RT Channelized	0	0	0		0	0		0		
Lanes	 	LR								
Configuration	d and of Con									
Delay, Queue Length, an	Northbound	Southbound		Westbound	d		Eastbound			
Approach		4	7	8	9	10	11	12		
Movement	1	-	 				LR			
Lane Configuration	LT						22			
v (veh/h)	18						918			
C (m) (veh/h)	1508			 	+		0.02			
v/c	0.01			 	+		0.07			
95% queue length	0.04			 		_	9.0			
Control Delay (s/veh)	7.4						A	\top		
LOS	Α						9.0			
Approach Delay (s/veh)	_	1					9.0 A			
Approach LOS			l				A			

Copyright © 2005 University of Florida, All Rights Reserved

Company Information		WO-WAY STOP							
eneral Information				format	lion				
alyst	J Bavos	A	Interse				Fuerte Farms/Damon County of San Diego		
gency/Co.		Associates, Inc.	Jurisdio				San D ieg o) 	
Pate Performed alysis Time Period	02/09/200 Midday P		Analys	s rear		Existing			
roject Description 030 ast/West Street: Fuerte	204-Fuerte Ran	CH	North/S	outh Str	eet: Damon	In		3.9	
ersection Orientation:					s): 0.25	LII		1	
		1.	Joludy 1	enou (m	3). 0.20				
ehicle Volumes an	<u>a Aajustmen</u>					0			
ajor Street	1	Northbound 2	3			Southbou 5	na I	6	
vement		T	R		4 L	 3		R	
olume (veh/h)	2	6	 		L	4		41	
ak-Hour Factor, PHF	0.61	0.61	0.61	-	0.61	0.61		0.61	
urly Flow Rate, HFR									
eh/h)	14	0	8		0	0		0	
cent Heavy Vehicles	2				0			****	
dian Type	Undivid				ded				
T Channelized			. 0					0	
ies	0	1	0		0	1		. 0	
nfiguration	LT							TR	
pstream Signal		0				0			
or Street		Eastbound				Westbou	nd		
vement	7	8	9		10	11		, 12	
	L	Т	R		L	Т		R	
ume (veh/h)	9		5					• .	
eak-Hour Factor, PHF	0.61	0.61	0.61		0.61	0.61		0.61	
ourly Flow Rate, HFR h/h)	0	6	67		3	9		0	
cent Heavy Vehicles	2	0	0		0	0		0	
ercent Grade (%)		0				0			
red Approach		N				N			
Storage		0				0			
<u>T</u> Channelized			0		·			0	
es	0	0	0		0	0		0	
onfiguration		LR							
elay, Queue Length, ar	nd Level of Sen	/ice							
roach	Northbound	Southbound		Westbou	ınd		Eastbound		
lovement	1	4	7	8	9	10	11	12	
e Configuration	<u>LT</u>	 	<u> </u>	l – –	- 	- 	LR	+	
eh/h)	3						22	+	
	1527						981	+	
(m) (veh/h)								-	
	0.00	ļ					0.02		
% queue length	0.01						0.07	<u> </u>	
ontrol Delay (s/veh)	7.4						8.8		
5	Α .						Α		
pproach Delay (s/veh)							8.8		
	T	1	1						

right © 2005 University of Florida, All Rights Reserved

HCS+TM Version 5.2

Generated: 2/15/2006 3:15 PM



			Site Info	rmatior	1					
eneral Information	TI Day (CO.)		Intersection			Fuerte Farm				
nalyst	J Bavos	sociates, Inc.		Jurisdiction			County of San Diego			
gency/Co.	02/09/2006	Sociates, mo.	Analysis Year Existing							
Date Performed Analysis Time Period	02/03/2000									
roject Description 03020	1 Fuerte Ranch									
ast/West Street: Fuerte Fa	arms Rd		North/Sou	ith Street:	Damon Lr	1				
ast/West Street. Fuerte 13 htersection Orientation: N	orth-South		Study Per	riod (hrs):	0.25					
ehicle Volumes and	<u>Aajustinents</u>	Northbound				Southboun				
Najor Street	1	2	3		4	5		6		
Novement		T	R		L	·T		R		
(aluma (uoh/h)	2	4	7			6		4 45		
/olume (veh/h) Peak-Hour Factor, PHF	0.45	0.45	0.45		0.45	0.45				
Hourly Flow Rate, HFR	13	0	0		0	0		0		
veh/h)					0			 -		
Percent Heavy Vehicles	. 2			I Individe						
Median Type				Undivided	<i>1</i> .		T	0		
RT Channelized			0		0	1		0		
Lanes	0	1	0		U	 		r _R		
Configuration	LT					0				
Upstream Signal		0	1			Westbour	d			
Minor Street		Eastbound			40	Vvestbour 11	iu I	12		
Movement	7	8	9		10	 		R		
	L	T	R		L					
Volume (veh/h)	6		0		0.45	0.45		.45		
Peak-Hour Factor, PHF	0.45	0.45	0.45		0.45					
Hourly Flow Rate, HFR (veh/h)	0	13	8		<u>4</u> 0	8		0		
Percent Heavy Vehicles	2	0	0		U	0				
Percent Grade (%)		0								
Flared Approach		N				$\frac{1}{1}$				
Storage		0				0		0		
RT Channelized			0					0		
Lanes	0	0	0		0	0		U		
Configuration		LR								
Delay, Queue Length, an	d Level of Serv	rice								
	Northbound	Southbound		Westbour	nd		Eastbound			
Approach	1	4	7	8	9	10	11	1:		
Movement	LT						LR			
Lane Configuration							13			
v (veh/h)	4		+	+			978			
C (m) (veh/h)	1595		+	-			0.01			
v/c	0.00			 		_	0.04	1		
95% queue length	0.01						8.7	1		
Control Delay (s/veh)	7.3					_	A A	+-		
LOS	Α									
Approach Delay (s/veh)							8.7			
Approach LOS							A			

Approach LOS -Copyright © 2005 University of Florida, All Rights Reserved

HCS+TM Version 5.2

Generated: 2/15/2006 3:15



General Information			Site Ir	nformatio	on			
Alalyst	R Peaslee	e/J Bavos	Interse	ction		Fuerte Dr	ive/Fuerte	Farms
A ency/Co.	Darnell & .	Associates, Inc.	Jurisdio	ction		County of	San Diego)
Date Performed	02/09/200	6	Analys	is Year	·	Existing		
Amalysis Time Period	AM Peak							
ect Description 030	204-Fuerte Rand	ch					•	
East/West Street: Fuerte	Drive		North/S	outh Stree	t: <i>Fuerte F</i>	arms		The Section
ninrsection Orientation:	East-West		Study F	Period (hrs)	: 0.25			
Venicle Volumes an	d Adjustment	s						*
Vajor Street		Eastbound				Westbou	nd	
viewent ·	1	2	3		4	5		6
	L	T	R		L	Т		R
/olume (veh/h)		217	16		3	286		····
² k-Hour Factor, PHF	0.57	0.57	0.57		0.57	0.57		0.57
ਜ ਼ ਾly Flow Rate, HFR veh/h)	0	380	28		5	501		0
Percent Heavy Vehicles	0				2			
M lian Type		0 1 0 Northbound		Undivide	d			
RT Channelized			. 0			·		0
_ares	0	1	0		0	1		0
Configuration			TR		LT			
Jpstream Signal		0				0		
Mor Street		Northbound				Southboo	ınd	
viement	7	8	9		10	11		12*
	L	· T	R		L	T		R
/chime (veh/h)	71		6					i Milia Garage
[⊳] ∈ k-Hour Factor, PHF	0.57	0.57	0.57	·	0.57	0.57		0.57
fourly Flow Rate, HFR veh/h)	124	0	10		0	0		0
eent Heavy Vehicles	2	0	2		0	0		0
[⊃] ercent Grade (%)		0				0		
Flared Approach		N				N		
torage		0				0		
RT Channelized			0					0
_ares	0	0	0		0	0		0
E figuration		LR			·			·
Delay, Queue Length, ar	nd Level of Serv	ice						
Ag roach	Eastbound	Westbound		Northbound	<u> </u>	1 5	Southbound	<u> </u>
viovement	1	4	7	8	9	10	11	12
ane Configuration		LT		LR				
/ (eh/h)		5		134	†			1
(m) (veh/h)		1151		319		<u> </u>		1
1/0-		0.00		0.42	†			
)5 queue length		0.01		2.00		 	 	
Control Delay (s/veh)		8.1		24.2				
.6		A		C .		 		
Approach Delay (s/veh)				24.2	<u> </u>		J	
√pproach LOS				C	····			

TWO-WAY STOP CONTROL SUMMARY

Approach LOS -or light © 2005 University of Florida, All Rights Reserved

HCS+TM Version 5.2

Generated: 2/15/2006 3:15 PM

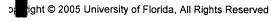


11.5			Site Infor	mation					
eneral Information	ID Pagalagili	Rayos	Intersection			Fuerte Drive/F		18	
nalyst	R Peaslee/J L Darnell & Ass	cociates Inc	Jurisdiction			County of Sar	n Diego		
gency/Co.	02/09/2006	oolatos, irio.	Analysis Y			Existing			
ate Performed	02/09/2000 PM Peak								
nalysis Time Period									
	-Fuerte Ranch		North/Sout	h Street:	Fuerte Fa	arms			
ast/West Street: Fuerte Dri	et_Mest		Study Peri	od (hrs):	0.25				
tersection Orientation: Ea									
ehicle Volumes and A	djustments	Eastbound				Westbound			
lajor Street	1	2	3		4	5	(
lovement	. L	Ť	R		L	Т		₹	
1.11.	<u> </u>	142	33		7	112	-	26	
/olume (veh/h)	0.86	0.86	0.86		0.86	0.86	0.8		
Peak-Hour Factor, PHF Hourly Flow Rate, HFR		165	38		8	130	()	
veh/h)	0	100				,			
Percent Heavy Vehicles	0			landing states of	2				
Median Type				Jndivided		T	1)	
RT Channelized			0			1		2	
anes	0	1	0		0				
Configuration			TR		LT	0			
Upstream Signal		0	<u></u>						
Minor Street		Northbound				Southbound 11		12	
Movement	7	8	9		10.	+		R	
MOVEMENT	L	·T	R		<u> </u>				
Volume (veh/h)	19		5		0.00	0.86	- 0	.86	
Peak-Hour Factor, PHF	0.86	0.86	0.86		0.86				
Hourly Flow Rate, HFR	22	0	5		0	0		0	
(veh/h)		1	2		0	0		0	
Percent Heavy Vehicles	2	0				0			
Percent Grade (%)		0				N			
Flared Approach		N				0			
Storage		0						0	
RT Channelized			0		0	0	_	0	
Lanes	0	0	0		U	- 			
Configuration		LR							
Delay, Queue Length, and	d Level of Serv	ice	<u></u>				outhbound		
Approach	Eastbound	Westbound		Northbour			11	1	
Movement	1 ·	4	7	8	9	10	11	 '	
Lane Configuration		LT		LR				+	
		8		27				-	
v (veh/h)		1369		690				↓	
C (m) (veh/h)		0.01		0.04				 	
v/c		0.02		0.12					
95% queue length		<u> </u>		10.4					
Control Delay (s/veh)		7.6	_	B				T	
LOS		A					<u> </u>		
Approach Delay (s/veh)				10.4					
Approach LOS				В			nerated: 2/15/	2006	

Copyright © 2005 University of Florida, All Rights Reserved



	T\	NO-WAY STOP C	ONTRO	DL SUMN	MARY					
<u>Seneral Information</u>			Site In	formation	on					
alyst		e/V Haskell/J Bavos	Intersed	ction		Fuerte/Ch	ase Ln			
gency/Co.		Associates Inc.	Jurisdic		,		San Diego			
ate Performed	02/09/200		Analysi	s Year		Existing				
alysis Time Period	AM Peak									
dject Description 030		rms					ē	3		
ast/West Street: Fuerte					t: Chase L	.ane		\$		
rsection Orientation:			Study P	eriod (hrs)	: 0.25					
ehicle Volumes an	d Adjustmen	ts								
aior Street		Eastbound				Westbou	nd			
vement	1	2	3		4	. 5		6		
		Т	R		L	T		R		
olume (veh/h)	43	168	3		0	227	· · · · · · · · · · · · · · · · · · ·	10		
k-Hour Factor, PHF	0.84	0.84	0.84		0.84	0.84		0.84		
Jurly Flow Rate, HFR eh/h)	51	200	3		. 0	270		11		
cent Heavy Vehicles	2				2					
dian Type				Undivide	d .					
Γ Channelized			0					0		
es	0	1	0		0	1	1			
figuration	LTR				LTR					
ostream Signal		0			e e	0				
or Street	·	Northbound				Southbou	nd	<u>.</u>		
vement	7	8	9		10	11		12		
	L	T	R		L	Т		; R		
ume (veh/h)	5	2	2		7	1		60		
ak-Hour Factor, PHF	0.84	0.84	0.84		0.84	0.84		0.84		
ourly Flow Rate, HFR	5	2	2	·	8	1		71		
cent Heavy Vehicles	2	2	2	.	2	2		2		
ercent Grade (%)		0				0				
ed Approach		N				N		· · · · · · · · · · · · · · · · · · ·		
torage		0				0				
T Channelized			0			+		0		
	0	1	0		0	1		0		
es onfiguration	- 	LTR				LTR		<u> </u>		
⊌ay, Queue Length, ar	nd Lovel of Se-	<u></u>	·			1				
roach	Eastbound	Westbound	· ·	Northbound			outhbound			
ovement	1	 								
		4	. 7	8	9	10	11	. 12		
e Configuration	LTR	LTR		LTR			LTR			
eh/h)	51	0		9 .	-		80			
(m) (veh/h)	1282	1369		418			695			
	0.04	0.00		0.02			0.12			
√ queue length	0.12	0.00		0.07			0.39			
ontrol Delay (s/veh)	7.9	7.6		13.8			10.9			
	Α	Α		В	1		В	 		
proach Delay (s/veh)				13.8	1		10.9			
mroach LOS						+				
ight © 2005 University of Flo		<u> </u>		В	······································	_1	В			



HCS+TM Version 5.2

Generated: 2/15/2006 3:15 PM



l lufa mantina			Site Info	rmation					
eneral Information	15.5 / 4	Ula elsell/I Dougs	Intersection			Fuerte/Chas	e Ln		
nalyst		Haskell/J Bavos sociates Inc.	Jurisdiction			County of Sa			
gency/Co.	02/09/2006	Sociales inc.	Analysis `			Existing			
ate Performed	PM Peak		11.00.70.0						
nalysis Time Period									
roject Description 03020	<u>4 - Fueπe Famil</u>		North/Sou	th Street: (Chase La	ne			
ast/West Street: Fuerte D	nve ost West			iod (hrs): 0					
tersection Orientation: E			1/				e d	,	
ehicle Volumes and	Adjustments	Fastbarrad				Westbound			
lajor Street		Eastbound	3		4	5	(
lovement	1	2 T	R		L	T.		₹	
() ()	20	164	1		5	107	5		
olume (veh/h)	0.79	0.79	0.79	0.	79	0.79	0.7	79	
Peak-Hour Factor, PHF					6	135	e	6	
lourly Flow Rate, HFR veh/h)	25	207	1						
Percent Heavy Vehicles	2				2				
Median Type				Undivided)	
RT Channelized			. 0))	
anes	0	1	0		0	1			
Configuration	LTR			. L	.TR				
Jpstream Signal		0				0			
Minor Street		Northbound				Southbour		40	
Movement	7	8	- 9		10	11		12	
VIOVEITIETIL		Т	R		L ·	Т		R	
Volume (veh/h)	4	5	2		31	2		9	
Peak-Hour Factor, PHF	0.79	0.79	0.79	. (0.79	0.79	0.	79	
Hourly Flow Rate, HFR	5	6	2		39	2		11	
(veh/h)						2		2	
Percent Heavy Vehicles	2	2	2		2	0			
Percent Grade (%)		0							
Flared Approach		N							
Storage		0				0		0	
RT Channelized			0					0	
Lanes	0	1	0		0	1 1 7 7 7 7		0	
Configuration		LTR				LTR			
Delay, Queue Length, an	d Level of Serv	ice							
Approach	Eastbound	Westbound		Northbound		5	Southbound		
Movement	1	4	7	8	9	10	11 .	12	
	LTR	LTR		LTR			LTR		
Lane Configuration	25	6		13			52		
v (veh/h)		1363		555			584		
C (m) (veh/h)	1442		0.02				0.09		
v/c	0.02	0.00		0.02		_	0.29		
95% queue length	0.05	0.01					11.8		
Control Delay (s/veh)	7.5	7.7		11.6	·		17.0 B	+-	
LOS	Α	Α		В					
Approach Delay (s/veh)				11.6			11.8		
Approach LOS			В			ľ	В		

Copyright © 2005 University of Florida, All Rights Reserved

HCS+TM Version 5.2

	T	WO-WAY STOP	CONTR	OL SUM	//ARY			
General Information				nformatio				
Analyst	R Peasle	e/V Haskell/J Bavo	s Interse	ection		Damon/F	uerte	
Agency/Co.	Darnell &	Associates Inc	Jurisd			County of San Diego		
Date Performed	02/09/20	06	Analys	sis Year		Existing		
Analysis Time Period	AM Peak							
roject Description 030		rms						
East/West Street: Fuerte		1	North/S	South Stree	t: Damon L	ane :	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
tersection Orientation:			Study	Period (hrs)	. 0.25			
Vehicle Volumes an	d Adjustmen							
Major Street		Eastbound	·			Westbou	ınd	
lovement		2	3		4	5		6
Johnma (wah/h)	L	T 455	R		L	Т		R
Volume (veh/h) eak-Hour Factor, PHF	60 0.50	155	22	· ·	10	301		15
ourly Flow Rate, HFR		0.50	0.50	'	0.50	0.50		0.50
veh/h)	120	310	44		20	602	. [30
ercent Heavy Vehicles	2		_		2			
ledian Type				Undivide	d			
RT Channelized			0	0				0
anes	0	1	0		0 -	1		0
onfiguration	LTR				LTR			
Jpstream Signal	·	0				0		
inor Street		Northbound				Southbound		
ovement	7	8	9		10	11		12
	L	Т	R		L	Т		R
plume (veh/h)	11	1	. 15		10	0	1.0	9
eak-Hour Factor, PHF	0.50	0.50	0.50)	0.50	0.50		0.50
lourly Flow Rate, HFR eh/h)	22	2	30		20	0		18
ercent Heavy Vehicles	2	2	2		2	2		2
Percent Grade (%)		0	1			0		
ared Approach		N				N N	- T	
Storage		0				0		
RT Channelized			0					0
nes	0	1	0		0	1		0
onfiguration		LTR	t 		<u> </u>	LTR		
Pelay, Queue Length, an	d Level of Serv					1 41.11		
proach	Eastbound	Westbound		Northbound	<u> </u>	<u> </u>	Southbound	
Novement	1	4	7	8	9	10	- 11	12
ne Configuration	LTR	LTR		LTR			LTR	1
veh/h)	120	20		54			38	
(m) (veh/h)	951	1205		234			191	1
	0.13	0.02		0.23			0.20	
% queue length	0.43	0.05		0.87			0.72	
ontrol Delay (s/veh)	9.3	8.0		24.9			28.5	
S	Α	Α		С			D	1
pproach Delay (s/veh)				24.9			28.5	
proach LOS		·		С		D		

C vright © 2005 University of Florida, All Rights Reserved

HCS+TM Version 5.

Generated: 2/15/2006 3:16 PM





			Site Info	rmation					
eneral Information	To 5 / . A	/ Llandsell / I Doves	Intersection			Damon/Fue	rte		
nalyst		Haskell/J Bavos sociates Inc	Jurisdiction				County of San Diego		
gency/Co.	02/09/2006	Sociales inc	Analysis			Existing			
ate Performed	MID Peak								
nalysis Time Period									
roject Description 03020 ast/West Street: Fuerte D	r		North/Sou	uth Street:	Damon La	ane			
tersection Orientation: E	ast-West			riod (hrs):					
						-			
ehicle Volumes and	Adjustinents I	Eastbound				Westboun			
ajor Street	1	2	3		4	- 5		6	
lovement		Т	. R		L	T		R	
olume (veh/h)	46	90	22		9	150		8 69	
eak-Hour Factor, PHF	0.69	0.69	0.69		0.69	0.69			
lourly Flow Rate, HFR	66	130	31		13	217		26	
Percent Heavy Vehicles	2				2				
Median Type				Undivided				0	
RT Channelized			0						
anes	0	1	0		0	1		0	
Configuration	LTR 1				LTR				
Jpstream Signal		0	<u> </u>			0			
Minor Street		Northbound				Southbou	nd	12	
Movement	7	8	9		10	11		12 R	
WO TO THE STATE OF	L	Т	R		L	T		12	
Volume (veh/h)	8	. 0	25		8	1 0.60		.69	
Peak-Hour Factor, PHF	0.69	0.69	0.69		0.69	0.69			
Hourly Flow Rate, HFR (veh/h)	11	0	36		11	1 2		17 2	
Percent Heavy Vehicles	2	2	2		2				
Percent Grade (%)		0				0			
Flared Approach		N				N		,	
Storage		0				0			
RT Channelized			0					0	
Lanes	0	1	0		0	1		0	
Configuration		LTR				LTR			
Delay, Queue Length, an	d Level of Serv	ice	· ·						
Approach	Eastbound	Westbound		Northbound			Southbound	_	
Movement	1	4	7	8	9	10	11	1:	
	LTR	LTR		LTR			LTR		
Lane Configuration	66	13		47			29	<u> </u>	
v (veh/h)	1323	1418		710			573		
C (m) (veh/h)		0.01	0.07			0.05			
v/c	0.05		0.07			0.16			
95% queue length	0.16	0.03	-	10.4			11.6		
Control Delay (s/veh)	7.9	7.6	-	10.4 B	+		В		
LOS	Α	- A					11.6		
Approach Delay (s/veh)				10.4		-	B		
Approach LOS				В			enerated: 2/15/	2006	

Copyright © 2005 University of Florida, All Rights Reserved

Information			Site Infor	mation		To 15			
neral Information	ID Possion/	Haskell/J Bavos	Intersection			Damon/Fuerte	Diogo		
ılyst	Darnell & Ass	ociates Inc	Jurisdiction			County of San	Diego		
ency/Co	02/09/2006	ooratee	Analysis Ye	ear		Existing	Existing		
te Performed	PM Peak								
alysis Time Period									
	- Fuerte Farms		North/South	n Street:	Damon L	ane		7	
st/West Street: Fuerte Dr	+ Most		Study Perio	od (hrs):	0.25				
rsection Orientation: Eas	[-VVESt					E			
hicle Volumes and A	djustments	Eastbound				Westbound			
jor Street		2	3		4	5	6		
vement	1	T	R		L	T	F 2		
	<u>L</u>	134	5		7	105	0.9	_	
olume (veh/h)	3	0.96	0.96		0.96	0.96	0.9	,0	
ak-Hour Factor, PHF	0.96		5		7	109	2)	
ourly Flow Rate, HFR reh/h)	3	139	5		2		-		
rcent Heavy Vehicles	2		<u> </u>	Individed					
edian Type				Julivided	1)	
T Channelized			0		0	1	(0	
ines	0	1	0		LTR	· · · · · · · · · · · · · · · · · · ·			
onfiguration	LTR		·		LIK	0			
Jpstream Signal		0	·			1			
		Northbound		Southbound 11				12	
inor Street	7	8	9		10	+ +		R	
vovement	L	Т	R		<u> </u>	0 3		10	
(l. //-)	2	0	5		2	0.96	1	.96	
olume (veh/h)	0.96	0.96	0.96		0.96				
eak-Hour Factor, PHF Hourly Flow Rate, HFR		0	5		2	0		10	
reh/h)	2				2	2		2	
Percent Heavy Vehicles	2	2	2			0			
Percent Grade (%)		0				I N			
Flared Approach		N				0			
		0					_	0	
Storage			0	L				0	
RT Channelized	0	1	0	·	0	1			
anes	-	LTR				LTR			
Configuration									
Delay, Queue Length, and	Level of Serv	Westbound		Northbou	ind	S	outhbound		
Approach	Eastbound	4	7	8	9	10	11	12	
Movement	1		+	LTR			LTR		
Lane Configuration	LTR	LTR		7	-		12		
v (veh/h)	3	7		821			883		
C (m) (veh/h)	1479	1438			_		0.01		
	0.00	0.00		0.01			0.04		
v/c	0.01	0.01		0.03			9.1	+-	
95% queue length	7.4	7.5	·	9.4				+-	
Control Delay (s/veh)		A		· A			A		
LOS	Α			9.4			9.1		
Approach Delay (s/veh)				A			Α		
Approach LOS		-		HCS+TM			enerated: 2/15	5/2006	

•

APPENDIX C

➤ Existing + Project Conditions Worksheets

Table C1 Existing + Project Freeway Segment Volumes and Level of Service Summary

Route	Limits	# Lanes	Capacity	ADT	Peak Hour %	Direction Split	Truck Factor	v/c Ratio	LOS
SR94	Sweetwater Springs to Avocado	2	4,400	57,106	8.60%	55.0%	5.0%	0.645	·C

Lanes - Number of lanes in one direction: HOV-High Occupancy Lanes

Capacity - Capacity in one direction

ADT - Average Daily Traffic

Peak Hour % - Percentage of average daily traffic occurring during the peak hour

Direction Split - Percentage of peak hour traffic traveling in peak direction.

Truck Factor - Truck/terrain factor to represent influence of heavy vehicles and/or grades.

Peak Hour Volume - Peak hour traffic in peak direction of travel/ For facilities with HOV lanes, ten percent is assumed to use HOV lanes.

v/c Ratio - Volume to Capacity Ratio

LOS - Caltrans District 11 procedure was used to estimate the freeway level of service. Designations vary from A to F, with four level of LOS F from F(0) to F(3).

			SHO	ORT R	EPOR							
eneral Information					Site Info	ormation						
nalyst gency or Co. ate Period Peaslee/V Harmalyst Darnell & As 02/09/2 AM Peaslee	ssociates 2006				Intersect Area Ty Jurisdic Analysi	pe tion	Co	te Dr/Avoo All other a unty of Sa xisting + I	areas an Diego			
ITIC I OFFICE								NB			SB	
olume and Timing Input		EB			WB	RT	LT	TH	RT	LT	TH	RT
	LT	TH	RT	LT	TH	1	1	2	0	1	2	0
umber of Lanes	1 -	1	1	1	1	R	L	TR		L	TR	
ane Group	L	T	R	L	T	37	333	728	50	73	631	176
olume (vph)	86	113	107	129	238	2	2	2	2	2	2	2
6 Heavy Vehicles	2	2	2	2	2		0.84	0.84	0.84	0.84	0.84	0.84
PHF	0.84	0.84	0.84	0.84	0.84	0.84	A	A	A	A	Α	Α
Pretimed/Actuated (P/A)	Α	Α .	A	A	A	A	2.0	2.0	+	2.0	2.0	
Startup Lost Time	2.0	2.0	2.0	2.0	2.0	2.0	4	2.0	+	2.0	2.0	
Extension of Effective Green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3		3	3^	T
Arrival Type	3	3	3	3	3	3	3	3.0	+	3.0	3.0	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	0	0	0	0	0
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0		+-	12.0	12.0	T
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0 N	0	I N	N	0	N
Parking/Grade/Parking	Ν	0	N	N N	0	N	1. 1	+ -	+			
Parking/Hour				+-	0	0	0	0		0	0	
Bus Stops/Hour	0	0	0	0	3.2	+-	 	3.2			3.2	
Minimum Pedestrian Time		3.2		4	04	Excl.	Left	NB Onl	· /	hru & RT		80
Phasing EB Only	WB On G = 16.		03	G:		G = 1		G = 7.0	1	6 = 31.5 $7 = 4.5$	G = Y =	
10 ,0.0	$\frac{G - 10.}{Y = 4.5}$		=	Υ =	=	Y = 4	1.5	Y = 0 Cycle Le				
(h-ra) (25							Cycle L	crigario			
Lane Group Capacity,	Contro	ol Dela	y, and	LOS	Determ	inatior	'	NB			SB	
		EB					396		T	87	961	
Adjusted Flow Rate	102	135	_ 127	154	283	44		1423	-	224	1137	
Lane Group Capacity	186	196	558	307	324	550	438				0.05	+
	0.55	0.69	0.23	0.50	0.87	0.08	0.90			0.39	0.85	+
v/c Ratio	0.11	0.11	0.35	0.17	0.17	0.35	0.25	0.41		0.13	0.33	+
Green Ratio	40.4	41.0		35.5		20.8	34.7	22.8		38.1	29.5	+
Uniform Delay d ₁		0.26		0.11			0.4	3 0.23		0.11	0.38	
Delay Factor k	0.15	9.8		1.3				9 1.1		1.1		
Incremental Delay d ₂	3.4							00 1.00	0	1.00		
PF Factor	1.000							.5 23.9	9	39.2		5
Control Delay	43.8		8 21.3 C	, 30. D		C	E	·C		D	D	
Lane Group LOS	D	D			49.		-+-	33.	7		35.	8
Approach Delay		38.						С			D	
Approach LOS D			Б					D				
Intersection Delay 37.3			Intersection LOS HCS+TM Version 5.2 Generated: 2/15/2									

			S	HORT	REPO	RT						
General Information					Site I	nformati	ion					
		tes			Area Jurisc	ection Type liction sis Year	Co	rte Dr/Av All other ounty of S Existing H	r areas San Dieg	go		
Volume and Timing Input												\$ 1.T
		EB			WB			NB			SB	
Number of Lanes	LT 1	TH 1	RT 1	LT 1	TH 1	RT 1	LT 1	TH	RT.	LT	TH	RT
Lane Group	L	T	R	L	$\frac{1}{T}$	R	1 /	2 TR	0	1 L	2 TR	0
Valume (vph)	48	61	6	120	115	425	17	955	109	187	713	63
% Heavy Vehicles	2	2	2	2	2	2	2	2	2	2	2	2
F■ F	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0:98	0.98
Pretimed/Actuated (P/A)	Α	A	A	A	A	A	A	A	A	A	A	A
Startup Lost Time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
E ension of Effective Green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Arrival Type	3	3	3	.3	3	3	3	3	·	3	3	
L it Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
P rking/Grade/Parking	Ν	0	N	N	0	N	N	0	Ν	N	0	Ν
Parking/Hour											,	
B s Stops/Hour	0	0	0	0	0	0	0	0		0	0 %	
Maimum Pedestrian Time		3.2	1		3.2			3.2			3.2	<u> </u>
	WB Only 6 = 14.0		03	G =)4	Excl. L		NB Only 6 = 5.0		ru & RT = 34.0	G =	8
li Ding	' = 4.5	Y :		Y =		Y = 4.8		r' = 0		= 34.0 = 4.5	Y =	
Duration of Analysis (hrs) = 0 .						1		ycle Len				
L ne Group Capacity, C	Contro	Delay	, and L	OS De	etermi	nation						
		EB			WB			NB			SB	
A usted Flow Rate	49	62	6	122	117	434	17	1085		191	792	
Lane Group Capacity	263	277	619	245	258	525	429	1348		263	1180	
v. Ratio	0.19	0.22	0.01	0.50	0.45	0.83	0.04	0.80		0.73	0.67	
Green Ratio	0.15	0.15	0.39	0.14	0.14	0.33	0.24	0.39		0.15	0.34	
Uniform Delay d ₁	37.7	37.9	18.8	40.2	40.0	31.1	29.3	27.6		41.0	28.7	
ay Factor k	0.11	0.11	0.11	0.11	0.11	0.36	0.11	0.35		0.29	0.24	
Incremental Delay d ₂	0.3	0.4	0.0	1.6	1.3	10.5	0.0	3.7	·	9.6	1.5	
Pactor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000		1.000	1.000	
Control Delay	38.0	38.3	18.8	41.8	41.3	41.6	29.3	31.3		50.7	30.2	
Line Group LOS	D	D	В	D	D	D	С	С		D	С	
Approach Delay		37.2			41.6			31.3			34.2	
Approach LOS		D			D			С			С	
rersection Delay		34.9				Intersec	tion LOS	3			С	

:/15/2006

opyright © 2005 University of Florida, All Rights Reserved

HCS+TM Version 5.2

Generated: 2/15/2006 3:20 PM

	TWO	-WAY STOP (<u> </u>			
eneral Information			Site Info	rmation				
	V Haskell/J E	Bavos	Intersection			Chase Ave/C		
nalyst gency/Co.	Darnell & Ass		Jurisdictio			County of Sa Existing Plus	n Diego Project	
ate Performed	02/09/2006		Analysis Y	ear		Existing Plus	Froject	
nalysis Time Period	AM Peak							
oject Description 030204	1-Fuerte Ranch				01			
ast/West Street: Chase Av	enue			th Street:		ne		
tersection Orientation: Ea	st-West		Study Peri	od (hrs): (0.25			
ehicle Volumes and A					·	Westbound		
ajor Street		Eastbound			1	5		3
ovement	1	2	3		4			₹
	L	Т	R		14	660		1
olume (veh/h)	0	351	57).95	0.95	0.	95
eak-Hour Factor, PHF	0.95	0.95	0.95			694		1
ourly Flow Rate, HFR reh/h)	0	369	60		2			. <u>. </u>
ercent Heavy Vehicles	2			Undivided				
ledian Type			0	Unuivided				0
T Channelized			0		1	1		0
anes	0	1	1 0		L		7	R
Configuration	LTR		<u> </u>		<u> </u>	0		
Jpstream Signal		0				Southbour	ıd	
Minor Street		Northbound			10	11		12
Movement	7	8	9		L	T		R
	. L	Т	R		0	0		0
/olume (veh/h)	60	0	0.95		0.95	0.95	0	.95
Peak-Hour Factor, PHF	0.95	0.95	0.95					0
lourly Flow Rate, HFR veh/h)	63	0	7		2	0 2		2
Percent Heavy Vehicles	2	2	2			0		
Percent Grade (%)		0				T N		
Flared Approach		Υ .				0		
Storage		1				-	_	0
RT Channelized			0			+		0
Lanes	0	1	0		0	LTR	_	<u> </u>
Configuration		LTR				I LIK		
Delay, Queue Length, an	d Level of Serv	ice				1	Southbound	
Approach	Eastbound	Westbound	1	Northbound			11	1
Movement	1	4	7	8	9	10		
Lane Configuration	LTR	L		LTR			LTR	+
	0	14		70			0	+
v (veh/h)	901	1130		198				_
C (m) (veh/h)	0.00	0.01		0.35			·	
v/c		0.04	+	1.50				
95% queue length	0.00	8.2	-	32.8				
Control Delay (s/veh)	9.0			D D	+			
LOS	Α	A	-	32.8				
Approach Delay (s/veh)	·							
Approach LOS				D HCS+ TM Ver			enerated: 2/15	/2006

Copyright © 2005 University of Florida, All Rights Reserved

eneral Information			Site	nformation	on				
alyst		II/J Bavos		ection	011	Chasa A	/e/Chase L		
gency/Co.		Associates, Inc.	Jurisd				f San Diego		
ate Performed	02/09/20			sis Year			Plus Projec		
alysis Time Period	PM Peak	(·	Externing t	140 1 10,00		
oject Description 030	0204-Fuerte Ran	nch							
ast/West Street: Chase			North/	South Stree	t: Chase I	ane		7.7%. 17.5%	
rsection Orientation:	East-West			Period (hrs)				: \$	
ehicle Volumes an	d Adjustmer	nts		1					
or Street		Eastbound				Westbou	ınd		
rement	1	2	T 3		4	5	and T	6	
	L	T	R		È	1 		R	
dume (veh/h)	0	873	41		2	464		0	
k-Hour Factor, PHF	0.96	0.96	0.9	5	0.96	0.96		0.96	
ourly Flow Rate, HFR eh/h)	0	909	42		2	483		0	
cent Heavy Vehicles	2				2				
edian Type			Undivided						
T Channelized			0			T		0	
es	0	1	0		1	1		0	
nfiguration	LTR				L			TR	
ostream Signal	·	0				0			
or Street		Northbound				Southboo	Southbound		
ovement	7	8	9		10	11		12	
	L .	T	R	·	L	Т		R :	
ıme (veh/h)	25	0	4		0	0		0	
ak-Hour Factor, PHF	0.96	0.96	0.96	3	0.96	0.96		0.96	
ourly Flow Rate, HFR (h)	26	. 0	4		0	. 0		0 -	
cent Heavy Vehicles	2	2	2		2	2		2	
ercent Grade (%)		0				. 0			
ed Approach		Y				N			
S torage		1				0			
Channelized			0			1		0	
es	0	1	0		0	1		0	
onfiguration		LTR				LTR			
ay, Queue Length, an	d Level of Serv	/ice							
roach	Eastbound	Westbound		Northbound	d		Southbound	1	
vement	1	4	7	8	9	10	11	. 12	
e Configuration	LTR	L	· · · · · · · · · · · · · · · · · · ·	LTR		1 10		12	
eh/h)	0	2		30	+	 	LTR	-	
(m) (veh/h)	1080				+	-	0	 	
an (venin)		722		133	<u> </u>	<u> </u>	ļ		
	0.00	0.00		0.23					
	0.00	0.01		0.82	1		1		
% queue length									
	8.3	10.0		41.4				1	
% queue length Introl Delay (s/veh) proach Delay (s/veh)		10.0 A		41.4 · E					

ght © 2005 University of Florida, All Rights Reserved

HCS+TM Version 5.2

41.4 E

Generated: 2/15/2006 3:21 PM



Wo-Way Stop Condo TWO-WAY STOP CONTROL SUMMARY Site Information **General Information** Chase Ave/Fuerte Dr Intersection V Haskell/J Bavos County of San Diego Analyst Jurisdiction Darnell & Associates, Inc. Existing Plus Project Agency/Co. Analysis Year 02/09/2006 Date Performed AM Peak Analysis Time Period 030204-Fuerte Ranch Project Description Fuerte Drive North/South Street: East/West Street: Chase Avenue 0.25 Study Period (hrs): East-West ntersection Orientation: Vehicle Volumes and Adjustments Westbound Eastbound 6 5 Major Street 4 3 R 1 Movement R T 684 265 3 322 0.95 Volume (veh/h) 0.95 0.95 0.95 0.95 0.95 Peak-Hour Factor, PHF 0 720 278 3 Hourly Flow Rate, HFR 338 0 (veh/h) __ __ Percent Heavy Vehicles 0 Undivided 0 Median Type 0 0 RT Channelized 1 1 0 1 0 Lanes L TR 0 Configuration 0 Upstream Signal Southbound Northbound 12 11 Minor Street 10 9 8 7 R T Movement R L 181 2 0.95 0.95 Volume (veh/h) 0.95 0.95 0.95 0.95 Peak-Hour Factor, PHF 0 0 0 190 Hourly Flow Rate, HFR 0 2 0 0 (veh/h) 0 0 0 Percent Heavy Vehicles 0 0 Percent Grade (%) Ν Ν Flared Approach 0 0 0 Storage 0 0 RT Channelized 0 0 0 0 0 anes LR Configuration Delay, Queue Length, and Level of Service Southbound Northbound Westbound Eastbound 11 Approach 10 9 8 4 1 Movement LR Ŀ ane Configuration 192 278 v (veh/h) 659 1229 C (m) (veh/h) 0.29 0.23

Copyright © 2005 University of Florida, All Rights Reserved

HCS+TM Version 5.2

1.21

12.7

В

12.7

В

Generated: 2/15/2006



0.87

8.8

Α

__

v/c

OS

95% queue length

Approach LOS

Control Delay (s/veh)

Approach Delay (s/veh)

	TV	VO-WAY STOP	CONTRO	OL SUMN	MARY					
General Information			Site Ir	nformatio	n					
A alyst	V Haskell	/J Bavos	Interse	ction		Chase Av	e/Fuerte Di	•		
Agency/Co.	Darnell &	Associates, Inc.	Jurisdi				San Diego			
Date Performed	02/09/200	6	Analys	is Year			lus Project			
A alysis Time Period	PM Peak					·		Y.		
Project Description 030	204-Fuerte Rand	ch						1.7%		
ast/West Street: Chase			North/S	outh Stree	t: Fuerte D	rive	ive			
rersection Orientation:	East-West		Study F	Period (hrs)			<i>.</i> *			
ehicle Volumes an	d Adjustmen	ts								
Vajor Street		Eastbound				Westbou	nd			
vement	1	2	3		4	5		6		
	L	Т	R		L	Т		R		
/olume (veh/h)		833	4		140	482				
ak-Hour Factor, PHF	0.97	0.97	0.97		0.97	0.97		0.97		
lourly Flow Rate, HFR veh/h)	0	858	4		144	496		0		
cent Heavy Vehicles	0				0			·		
Adian Type				Undivide	d					
RT Channelized		·	0					0		
ies ·	0	1	0		1	1		0		
onfiguration ————————————————————————————————————			TR		L	T				
Ipstream Signal		0				0				
or Street		Northbound				Southbou	ınd			
/lovement	7	8	9		10	11		12		
	L	Т	R		L	Т		R		
/ume (veh/h)	5		177					, F		
eak-Hour Factor, PHF	0.97	0.97	0.97		0.97	0.97		0.97		
lourly Flow Rate, HFR █h/h)	5	0	182		0	0		0		
cent Heavy Vehicles	0	0	0		0	0		0		
Percent Grade (%)		0				0				
red Approach		N				l N				
Storage		0				0		·····		
RT Channelized			0					0		
es	0	0	0		0	0		0		
Configuration		LR	† <u> </u>			1				
Alay, Queue Length, ar	nd Level of Serv			1						
proach	Eastbound	Westbound		Northbound	d	T	Southbound	1		
lovement	1	4	7	8	9	10	11	12		
e Configuration	•	L	<u> </u>	LR	+ -	+	1	† · · ·		
eh/h)		144		187	 	 		+		
(m) (veh/h)		789		<u> </u>	 	 	 	+		
	·			333			<u> </u>	+		
5% queue length		0.18		0.56	1		<u> </u>	 		
		0.66		3.26			ļ	ļ		
Control Delay (s/veh)		10.6		28.8						
.68		В		D						
Approach Delay (s/veh)				28.8						
Amroach LOS				D						

right © 2005 University of Florida, All Rights Reserved

HCS+TM Version 5.2

Generated: 2/15/2006 3:21 PM



		WAY STOP C	Site Infor	mation				
eneral Information			Intersection			Fuerte Farms	/Damon	
nalyst	R Peaslee/J E	Bavos	Jurisdiction			County of Sar	n Diego	
gency/Co.	Darnell & Ass	ociates, Inc.	Analysis Ye	ear		Existing Plus	Project	
ate Performed	02/09/2006		Allalysis 10	, ui				
nalysis Time Period	AM Peak		1					
roject Description 030204	-Fuerte Ranch		North/South	Street: D	amon Lr)	·	
ast/Mest Street: Fuerte Far	ms Ka		Study Perio	od (hrs): 0	25			
tersection Orientation: No.	th-South		Study 1 Che	/d (1110).				
ehicle Volumes and A	djustments					Southbound		
ajor Street	a de la companya de	Northbound			1	5	6	
lovement	1	2	3 R		T .	Т	R	
	L.	Т	0)	4	40	
/olume (veh/h)	9	4	0.50	0.5		0.50	0.50)
Peak-Hour Factor, PHF	0.50	0.50				2	10	
lourly Flow Rate, HFR veh/h)	18	2	4	()			
Percent Heavy Vehicles	2			Individed				
Median Type				muiviueu			0	
RT Channelized			0		0	1	0	
Lanes	0	1	0		TR	+		
Configuration	LTR		<u> </u>		117	0		
Upstream Signal		0				Westbound	d	
Minor Street		Eastbound	0 11		- 1	2		
Movement	7	8	9		10	T		- -
IVIOVOLLION	L	T	R	·	L	1		5
Volume (veh/h)	9	1	2		0	0.50		50
Peak-Hour Factor, PHF	0.50	0.50	0.50	- 0	.50			
Hourly Flow Rate, HFR	4	. 8	. 80		18	8		0 0
(veh/h) Percent Heavy Vehicles	2	0	0		0			
Percent Grade (%)		0				0		
		N				N		
Flared Approach		0				0		<u>~</u>
Storage		-	0					0
RT Channelized	1	1	0		0	1		0
Lanes	0	LTR				LTR		
Configuration	<u> </u>							
Delay, Queue Length, and	d Level of Serv	ICE	1	Vestbound			Eastbound	
Approach	Northbound	Southbound	7	8	9	. 10	11	
Movement	1	4	 '	LTR			LTR	
Lane Configuration	LTR	LTR					24	
v (veh/h)	18	4		12			872	\vdash
C (m) (veh/h)	1508	1625		1004		_	0.03	\vdash
	0.01	0.00		0.01				\vdash
V/C	0.04	0.01		0.04			0.08	+
95% queue length		7.2		8.6			9.2	1
Control Delay (s/veh)	7.4		_	Α			Α	丄
LOS	Α	A		8.6	<u></u>		9.2	
Approach Delay (s/veh)							Α	
Approach LOS				A HCS+TM Vers			enerated: 2/15/	2006

Copyright © 2005 University of Florida, All Rights Reserved

		VO-WAY STOP								
eneral Information			Site I	nforma	tion					
alyst	J Bavos		Interse	ection		Fuerte Fa	rms/Damoi	n		
Agency/Co	Darnell &	Associates, Inc.	Jurisdi	ction		County of	San Diego)		
ate Performed	02/09/200		Analys	is Year		Existing P	Existing Plus Project			
alysis Time Period	Midday Pe									
roject Description 030		ch .						94.E		
ast/West Street: Fuerte			North/S	South Str	eet: <i>Damon</i>	Ln				
rsection Orientation:	North-South	77777 27 d 17 d 17 d 17 d 17 d 17 d 17 d	Study I	Period (h	rs): 0.25					
ehicle Volumes an	d Adjustmen	ts	-				·.			
aior Street		Northbound			Southbound					
vement	1	2	3		4	5		6		
	L	Т	R		L	T		R		
olume (veh/h)	2	6	0		7	4		41		
k-Hour Factor, PHF	0.61	0.61	0.61		0.61	0.61		0.61		
ourly Flow Rate, HFR eh/h)	14	3	8		0	1		4		
cent Heavy Vehicles	2				0					
dian Type				Undivi	ded					
T Channelized			0					0		
es	0	1	0		0	1		0		
figuration	LTR				LTR					
pstream Signal	·	0				0				
or Street		Eastbound		Westbound			nd			
ovement	7	8	9		10	11		12		
	L	Т	R		L	Т		R		
ume (veh/h)	9	2	5		0	1		3		
eak-Hour Factor, PHF	0.61	0.61	0.61		0.61	0.61		0.61		
ourly Flow Rate, HFR	11	6	67		3	9		0		
cent Heavy Vehicles	2	0	0		. 0	0		0		
ercent Grade (%)		0	-			0				
ed Approach		N	1			T N				
torage		0				0				
T Channelized			0		·			0		
es	0	1	0		0	1		0		
onfiguration		LTR	1 			LTR				
elay, Queue Length, a	nd I evel of Some									
oroach	Northbound	Southbound	i	Westbou	ınd ·		Eastbound			
lovement	1	4	7	vvesibor	9	10	11	12		
				 	- 	10	<u> </u>	12		
e Configuration	LTR	LTR		LTR			LTR			
eh/h)	3	. 11		5	·		25			
(m) (veh/h)	1527	1624		1001			926			
	0.00	0.01		0.00			0.03			
% queue length	0.01	0.02		0.02	·		0.08			
ontrol Delay (s/veh)	7.4	7.2		8.6			9.0	1		
G 5	. A	Α		A			A	1		
pproach Delay (s/veh)				8.6			9.0			
pprodon Donly (3/Vert)				0.0			9.0			

right © 2005 University of Florida, All Rights Reserved

HCS+TM Version 5.2

Generated: 2/15/2006 3:21 PM



TWO-WAY STOP CONTROL SUMMARY

	. ,,,,,	WAY STOP C	Site Info	mation				
eneral Information						Fuerte Farms	s/Damon	
nalyst	J Bavos		Intersectio			County of Sa	n Diego	
gency/Co.	Darnell & Ass	sociates, Inc.	Jurisdiction Analysis Y			Existing Plus	: Project	
ate Performed	02/09/2006		Analysis I	Cai				
nalysis Time Period								
oject Description 030204	1-Fuerte Ranch		North/Sout	h Street: D	amon Lr	7		
ast/Mest Street: Fuerte Fa	irms Ra		Study Peri	od (hrs): 0.	25			
tersection Orientation: No	orth-South		joudy 1 on	<u> </u>			•	
ehicle Volumes and A	Adjustments					Southbound	i	
ajor Street		Northbound	3		4	5	6	
lovement	1	2 T	R		L	T	· F	
	L	4	0		7	- 6	4	
olume (veh/h)	2 0.45	0.45	0.45	0.	45	0.45	0.4	5
eak-Hour Factor, PHF					0	2	. 6	i
lourly Flow Rate, HFR veh/h)	13	4	0		0			
Percent Heavy Vehicles	2			Undivided	0	1		
Median Type			0	Citalvidea			()
RT Channelized			0		0	1)
anes	0	1	-		TR			
Configuration	LTR	0	 			0		
Jpstream Signal						Westboun	ıd	
Minor Street		Eastbound	1 9		10	11		12
Movement	7	8 T	R		L	T		R
	L	2	0		0	1	1	3
Volume (veh/h)	6	0.45	0.45).45	0.45	0	45 .
Peak-Hour Factor, PHF	0.45				4	8	İ	0
Hourly Flow Rate, HFR (veh/h)	15	13	8		0	0		0
Percent Heavy Vehicles	2	0	0			0		
Percent Grade (%)		0				T N		
Flared Approach		N				0		
Storage		0						0
RT Channelized			0			1		0
Lanes	0	1	0		0	LTR		<u> </u>
Configuration		LTR				LIK		
Delay, Queue Length, an	d Level of Serv	ice					Eastbound	
Approach	Northbound	Southbound		Westbound			11	1:
Movement	1	4 .	7	8	9	10	LTR	
Lane Configuration	LTR	LTR		LTR				-
	4	15		8			17	-
v (veh/h)	1595	1625		1000			888	ऻ—
C (m) (veh/h)	0.00	0.01		0.01			0.02	-
v/c	0.00	0.03		0.02			0.06	
95% queue length		7.2	+	8.6			9.1	
Control Delay (s/veh)	7.3		A				Α	
LOS	Α	A		8.6	1		9.1	
Approach Delay (s/veh)				A			Α	
Approach LOS				HCS+TM Vers			enerated: 2/15	2006

Copyright © 2005 University of Florida, All Rights Reserved

HCS+TM Version 5.2



Congred Informati		NO-WAY STOR				··		
Seneral Information				Informa	ation			
Allyst		e/J Bavos		ection		Fuerte Dri	/e/Fuerte	Farms
Agency/Co. Date Performed		Associates, Inc.		diction		County of		
	02/09/200		Analy	Analysis Year			us Projec	t
A alysis Time Period	AM Peak							
reject Description 030 ast/West Street: Fuerte		<u>ch</u>						
					reet: Fuerte	Farms		r þ
rsection Orientation:			Study	Period (h	nrs): 0.25			
enicle Volumes an	<u>d Adjustmen</u>	ts	* .					
lajor Street		Eastbound				Westbour	ıd	
ement	1	2	3		4	5		6
	L	T	F		L	Т	·	R
olume (veh/h)		223	17		3	301		
k-Hour Factor, PHF	0.57	0.57	0.5	7	0.57	0.57		0.57
rly Flow Rate, HFR eh/h)	0	391	29		5	528		0
ent Heavy Vehicles	0				2			
ian Type				Undiv	ided	**		
T Channelized			C					0
es	0	. 1	0		0	1		0
figuration			TF	?	LT			
ostream Signal		0		-		0		
or Street		Northbound	bound				nd L	
ement	7	8	9		10	Southbour 11	'	12
	L	Т	R		L	 	_	R
me (veh/h)	72		6			+		
k-Hour Factor, PHF	0.57	0.57	0.5	7	0.57	0.57		0.57
ourly Flow Rate, HFR	126	0	10		· · · · · · · · · · · · · · · · · · ·			
h/h)					0	0		0
ent Heavy Vehicles	2	0	2		0	0		0
ercent Grade (%)		0				0		
ed Approach		N				N		
orage		0				0		
Channelized			0		·····			0
es	0	0	1 0		0	0		0
iguration		LR	† 			 		
lay, Queue Length, ar	d Level of Serv							
oach	Eastbound	Westbound		Northbo	und	1		
vement	1	4	7	7			outhbound	
ne Configuration	I		7	8	9	10	11	12
		LT -		LR				1
:h/h)		5		136				
(m) (veh/h)		1139		302				
	4	0.00		0.45				
queue length		0.01		2.22		1	· · · · · · · · · · · · · · · · · · ·	1
ntrol Delay (s/veh)		8.2		26.3		+		+
, (A		D D		+		+
proach Delay (s/veh)								
proach LOS				26.3				
amach LOS	'			D		1		

		-WAY STOP (Site Infor				
eneral Information	R Peaslee/J	Rayos	Intersection			Fuerte Drive/Fu	
nalyst	Darnell & As		Jurisdiction			County of San	
gency/Co.	02/09/2006	Sociatos, IIIo.	Analysis Y			Existing Plus P	roject
ate Performed	PM Peak						
nalysis Time Period)4-Fuerte Ranch						
oject Description 03020 ast/West Street: Fuerte D			North/Sout	h Street:	Fuerte Fa	rms	
ast/West Street: Fuerte Ditersection Orientation: E	ast-West		Study Perio	od (hrs): (0.25		
		A THE STATE OF		g			
ehicle Volumes and	Aajustinents T	Eastbound				Westbound	
ajor Street	1	2	3		4	5	6
ovement	 	 	R		L	T	R
olume (veh/h)	 	161	35		.7	120	0.86
eak-Hour Factor, PHF	0.86	0.86	0.86	0).86	0.86	-
ourly Flow Rate, HFR	0	187	40		8	139	0
ercent Heavy Vehicles	0				2		
ledian Type			Undivided			T	0
T Channelized			0				0
anes	0	1	0		0	1	-
Configuration			TR		LT	1	
Jpstream Signal		0				0	
Minor Street		Northbound				Southbound	12
Movement	7	8	9		10	11	12 R
AIOACHIOHE	L	T	R		L	Т	
/olume (veh/h)	20		5		2.22	0.00	0.86
Peak-Hour Factor, PHF	0.86	0.86	0.86		0.86	0.86	
Hourly Flow Rate, HFR	23	0	5		0	0	0
Percent Heavy Vehicles	2	0	- 2		0		_ <u>_</u>
Percent Grade (%)		0				0	
Flared Approach		N				N	
Storage		0				0	
RT Channelized			0				0
	0	0	0		0	0	0
Lanes Configuration	-	LR					
	nd Level of Serv						
Delay, Queue Length, ar	Eastbound	Westbound	T N	lorthbound		Sou	uthbound
Approach	1	4	7 1	8	9	10	11
Movement		LT	+	LR			
Lane Configuration			1	28	 		
v (veh/h)		8	 	661			
C (m) (veh/h)		1341				+	
v/c		0.01		0.04	-		
95% queue length		0.02		0.13			
Control Delay (s/veh)		7.7		10.7			
LOS		A		В			
			10.7				
Approach Delay (s/veh)			В				
Approach LOS	orida All Rights Reser			HCS+ TM Ver	reion 5.2	Gene	rated: 2/15/2006

Copyright © 2005 University of Florida, All Rights Reserved



1		TWO-WAY STOP	CONTR	OL SUM	MARY			rage ror		
General Information				nformati						
alyst	R Peas	lee/V Haskell/J Bavos				Fuerte/Ci	hase I n			
Agency/Co.		& Associates Inc.	Jurisd				f San Diego)		
Date Performed	02/09/2	006		sis Year			Plus Project			
alysis Time Period	AM Pea									
Project Description 030		arms				<u> </u>				
East/West Street: Fuerte			North/S	South Stree	et: Chase L	ane				
Ir ersection Orientation:	East-West		Study	Period (hrs): 0.25					
Vehicle Volumes an	d Adjustme	ents								
Major Street		Eastbound	·			Westbou	ınd			
Nement	1	2	3		4	5		6		
	L	Т	R		L	T		R		
Volume (veh/h)	44	178	3		0	231		10		
F ak-Hour Factor, PHF	0.84	0.84	0.84	1	0.84	0.84		0.84		
Hourly Flow Rate, HFR (veh/h)	52	211	3		0	275		11		
Procent Heavy Vehicles	2	· 			2					
Madian Type				Undivide	ed					
RT Channelized			. 0					0		
Lenes	0	1	. 0		0	1		0		
O hfiguration	LTR				LTR					
Upstream Signal		0				0				
Mor Street		Northbound				Southbound				
V. vement	7	8	9		10	11		12		
	<u> </u>	Т	R		L	T		R		
✓ ume (veh/h)	5	2	2		7	_ 1		60		
Plak-Hour Factor, PHF	0.84	0.84	0.84		0.84	0.84		0.84		
Hourly Flow Rate, HFR	5	2	2		8	1		71		
cent Heavy Vehicles	2	2	2		2	2		2		
Percent Grade (%)		0				0				
Fed Approach		N				N				
S torage		0				0				
RT Channelized			0					0		
_: es	0	1	0		0	1		0		
Configuration	·	LTR				LTR				
Delay, Queue Length, an	d Level of Se	rvice								
roach	Eastbound	Westbound		Northbound	d		Southbound			
√lövement	1	4	7	8	9	10	11	12		
ane Configuration	LTR	LTR		LTR	1	1	LTR	12		
eh/h)	52	0		9	 	 	80	 		
C (m) (veh/h)	1276	1356		408	 	 	ļ			
/	0.04	0.00			-		688	ļ		
queue length	0.04			0.02	1		0.12	ļ		
		0.00		0.07	1		0.39	ļ		
Control Delay (s/veh)	7.9	7.7		14.0	1		10.9			
.06	Α	A		В			В			
oproach Delay (s/veh)				14.0			10.9			
Approach LOS		-		В			В			

Generated: 2/15/2006 3:22 PM

o right © 2005 University of Florida, All Rights Reserved

wo-Way Stop Control TWO-WAY STOP CONTROL SUMMARY Site Information **General Information** Fuerte/Chase Ln Intersection R Peaslee/V Haskell/J Bavos County of San Diego Analyst Jurisdiction Darnell & Associates Inc. Existing Plus Project Agency/Co. Analysis Year 02/09/2006 Date Performed PM Peak Analysis Time Period 030204 - Fuerte Farms Project Description Chase Lane North/South Street: East/West Street: Fuerte Drive 0.25 Study Period (hrs): Intersection Orientation: East-West Vehicle Volumes and Adjustments Westbound Eastbound 6 **Major Street** 4 3 2 R Movement L R L 5 120 5 1 169 20 0.79 Volume (veh/h) 0.79 0.79 0.79 0.79 0.79 Peak-Hour Factor, PHF 6 151 6 Hourly Flow Rate, HFR 1 213 25 (veh/h) 2 __ 2 Percent Heavy Vehicles Undivided 0 Median Type 0 0 RT Channelized 1 0 0 1 0 Lanes LTR LTR Configuration 0 0 Upstream Signal Southbound Northbound 12 Minor Street 11 10 9 R T Movement R L T L 10 2 31 2 5 4 0.79 Volume (veh/h) 0.79 0.79 0.79 0.79 0.79 Peak-Hour Factor, PHF 12 2 39 Hourly Flow Rate, HFR 2 6 5 2 (veh/h) 2 2 2 2 2 Percent Heavy Vehicles 0 0 Percent Grade (%) Ν Ν Flared Approach 0 0 0 Storage 0 0 RT Channelized 1 0 0 1 0 anes LTR LTR Configuration Delay, Queue Length, and Level of Service Southbound Northbound Westbound Eastbound Approach 11 10 9 7 4 1 Movement LTR LTR **LTR** LTR Lane Configuration 53 13 6 25 v (veh/h) 570 539 1356 1423 C (m) (veh/h) 0.09 0.02 0.00 0.02 v/c 0.31 0.07 0.01 0.05 95% queue length

Copyright © 2005 University of Florida, All Rights Reserved

7.6

Α

HCS+TM Version 5.2

11.8

В

11.8

В

Generated: 2/15/2006

12.0

В

12.0

В

7.7

Α

Approach LOS

LOS

Control Delay (s/veh)

Approach Delay (s/veh)

Two-Way Stop Control								Page 1 of	
	T\	NO-WAY STOP	CONTR	OL SUM	MARY				
General Information				nformati					
A alyst	R Peasle	e∕V Haskell/J Bavo	s Interse	ection		Damon/Fu	<i>jerte</i>		
Agency/Co.		Associates Inc	Jurisd			County of)	
Date Performed	02/09/200	06	Analys	sis Year		Existing P			
A alysis Time Period	AM Peak								
Project Description 030		rms						XI.	
ast/West Street: Fuerto			North/S	South Stre	et: Damon	Lane		-4 - 3	
n rsection Orientation:	East-West			Period (hrs					
/ehicle Volumes an	d Adjustmen	ts							
Meior Street		Eastbound				Westbou	nd		
/ement	1	2	3		4	5		6	
	L	Т	R		L	T		R	
/olume (veh/h)	60	160	23		11	313		15	
k-Hour Factor, PHF	0.50	0.50	0.50)	0.50	0.50		0.50	
Hodrly Flow Rate, HFR veh/h)	120	320	46		22	626		30	
ecent Heavy Vehicles	2				2	-			
Malian Type				Undivide	ed		· · · · · · · · · · · · · · · · · · ·		
RT Channelized			0					0	
a es Configuration	0	1	0		0	1		0	
onfiguration	LTR			•	LTR				
pstream Signal		0				0		į.	
or Street		Northbound				Southbou	nd	*.	
ovement	7	8	9		10	11	1	12	
	L	Т	R		L	T T		R	
(cume (veh/h)	14	1	18		10	0		9	
eak-Hour Factor, PHF	0.50	0.50	0.50		0.50	0.50		0.50	
lourly Flow Rate, HFR (1)	28	2	36		20	0		18	
etent Heavy Vehicles	2	2	2		2	2		2	
ercent Grade (%)		0				0			
la ed Approach		N				I N			
Storage		0				0			
T_Channelized			0					0	
aes	.0	1	0		0	1		0 .	
onfiguration		LTR				LTR			
elay, Queue Length, ar	nd Level of Serv	ice							
roach	Eastbound	Westbound	·	Northboun	nd	S	outhbound	d t	
lovement	1	4	7	8	9	10	11	12	
a Configuration	LTR	LTR		LTR			LTR	1	
(= h/h)	120	22		66			38		

elay, Queue Length, ar	,	T							
\p roach	Eastbound	Westbound	Northbound				Southbound		
Novement	1	4	7	8	9	10	11	12	
.a Configuration	LTR	LTR		LTR			LTR		
(_ h/h)	120	22		66			38		
(m) (veh/h)	931	1193		217			177		
/c	0.13	0.02		0.30			0.21		
57 queue length	0.44	0.06		1.23			0.78		
Control Delay (s/veh)	9.4	8.1		28.7			30.8		
C	Α .	Α		D			D		
pproach Delay (s/veh)		<u></u> -		28.7			30.8		
peroach LOS				D			. D		

рр ght © 2005 University of Florida, All Rights Reserved

HCS+TM Version 5.2

Generated: 2/15/2006 3:22 PM



	1 440	-WAY STOP C							
eneral Information	:		Site Info			Damon/Fue	rte		
nalyst	R Peaslee/V	Haskell/J Bavos	Intersection			County of S			
gency/Co.	Darnell & Ass	sociates Inc	Jurisdictio				Existing Plus Project		
ate Performed	02/09/2006		Analysis Y	ear		LXISTING 1 10	o r reject		
nalysis Time Period	MID Peak								
oject Description 03020	4 - Fuerte Farms				Jaman La	200			
ast/West Street: Fuerte Di			North/Sou	th Street: L	Jamon La	ine .			
tersection Orientation: Ea	ast-West		Study Per	iod (hrs): 0	1.20				
ehicle Volumes and <i>I</i>						10/th our	d		
ajor Street		Eastbound				Westboun 5		6	
ovement	1	2	3		4	- 3		R	
Overnone	L	Т	R		L 12	156		8	
olume (veh/h)	46	105	25		.69	0.69		69	
eak-Hour Factor, PHF	0.69	0.69	0.69					6	
lourly Flow Rate, HFR veh/h)	66	152	36		17	226			
ercent Heavy Vehicles	2				2	<u></u>			
Median Type				Undivided		1		0	
RT Channelized			0			1		0	
anes	0	1	0		0	1			
Configuration	LTR				_TR	0			
Jostream Signal	-	0							
Minor Street		Northbound				Southbou	na	12	
Movement	7	8	9		10	11		R	
VIOVEITIENT	L	Т	R		L	T		12	
√olume (veh/h)	9	0	26		8	1 0.60		0.69	
Peak-Hour Factor, PHF	0.69	0.69	0.69		0.69	0.69			
Hourly Flow Rate, HFR (veh/h)	13	0	37		11	1		17 2	
Percent Heavy Vehicles	2	2	2		2	2			
Percent Grade (%)		0				0			
		N				N			
Flared Approach	+	0				0			
Storage			0					0	
RT Channelized	0	1	0		0	1		0	
Lanes	 	LTR				LTR			
Configuration	1								
Delay, Queue Length, an	d Level of Serv	Westbound		Northbound			Southbound		
Approach	Eastbound		7	8	9	10	11	1	
Movement	11	4		LTR			LTR		
Lane Configuration	LTR	LTR	1	50			29		
v (veh/h)	66	17			-		548	1	
C (m) (veh/h)	1313	1386		662	 	_	0.05	1	
v/c	0.05	0.01		0.08	ļ.		0.17	+	
95% queue length	0.16	0.04		0.24				+-	
Control Delay (s/veh)	7.9	7.6	10.9		11.9	+			
	A	A		В			B		
LOS .				10.9			11.9		
Approach Delay (s/veh)				В			В		
Approach LOS	<u> </u>	ved		HCS+TM Ver	rion 5.2		Generated: 2/15	/2006	

Copyright © 2005 University of Florida, All Rights Reserved

11 C 41 a.m.			Site Info	rmatic	on_						
neral Information	ID DecelooA/	Haskell/J Bavos	Intersection				Damon/Fuer				
alyst	Darnell & Ass	rociates Inc	Jurisdictio				County of Sa				
ency/Co.	02/09/2006	OCIAICS IIIO	Analysis Y				Existing Plus	s Project			
e Performed	PM Peak		1					· · · · · · · · · · · · · · · · · · ·			
alysis Time Period											
ject Description 030204	- Fuerte Farms		North/Sou	th Stree	et: D	amon La	ane				
t/West Street: Fuerte Dr	-4 14/o.o.t		Study Peri	iod (hrs): 0.	25					
rsection Orientation: Ea.									. 1 3		
hicle Volumes and A	djustments	e di mad					Westbound	d			
or Street		Eastbound	3	3 4		1	5		6		
vement	1	2 T	R	_		_	Т		R		
	<u>L</u>	149	8		1	0	111		2		
ume (veh/h)	3	0.96	0.96		0.	96	0.96	0	.96		
ak-Hour Factor, PHF	0.96				1	^	115		2		
urly Flow Rate, HFR h/h)	3	155	8			0 					
rcent Heavy Vehicles	2			Undivid		-	<u> </u>				
edian Type				Unaivia	eu				0		
Channelized			0			0	1		0		
nes	0	1	0				 				
onfiguration	LTR					TR	0				
ostream Signal		0									
nor Street		Northbound				10	Southbound				
ovement	7	8	9			10	 		: R		
Ovement	L	T	R			L			0		
olume (veh/h)	3	0	6			2	0		0.96		
eak-Hour Factor, PHF	0.96	0.96	0.96 0.96		0.96						
ourly Flow Rate, HFR	3	0	6			2	0		0		
reh/h)	2	2	2			2	2		2		
ercent Heavy Vehicles		0					0				
ercent Grade (%)		T N	T				N				
lared Approach		0	-				0				
Storage		U	0						0		
RT Channelized						0	1		0		
anes	0	1	0				LTR				
Configuration		LTR									
Delay, Queue Length, and	d Level of Serv	ice	T				- T	Southboun	d		
Approach	Eastbound	Westbound		Northbo	ouna-		10	11	12		
Movement	1	4	7	8		9	10	LTR	- 		
Lane Configuration	LTR	LTR		LTF	₹				_		
	3	10		9				2			
/ (veh/h)	1471	1416		788	3			639			
C (m) (veh/h)		0.01		0.0	1			0.00	_		
v/c	0.00		-	0.0				0.01			
95% queue length	0.01	0.02		9.6				10.7			
Control Delay (s/veh)	7.5	7.6					_	В			
LOS	Α	Α	A		<u></u>	_	10.7				
Approach Delay (s/veh)				9.6	5			10.7 B			
Approach LOS			A Generated: 2/15								

APPENDIX D

➤ 2030 Base Worksheets

新聞かれてはいい。 AL SAN ASSET CAR TO THE TO THE

Table D1 2030 Freeway Segment Volumes and Level of Service Summary

Route	Limits	# Lanes	Capacity	ADT	Peak Hour %	Direction Split	Truck Factor	v/c Ratio	LOS
SR94	Sweetwater Springs to Avocado	2	4,400	88,000	8.60%	55.0%	5.0%	0.993	Е
5K94	Avocado to Jamacha (SR54)	2	4,400	67,000	8.60%	55.0%	5.0%	0.756	С

Lanes - Number of lanes in one direction: HOV-High Occupancy Lanes

Capacity - Capacity in one direction

ADT - Average Daily Traffic

Peak Hour % - Percentage of average daily traffic occurring during the peak hour

Direction Split - Percentage of peak hour traffic traveling in peak direction.

Truck Factor - Truck/terrain factor to represent influence of heavy vehicles and/or grades.

Peak Hour Volume - Peak hour traffic in peak direction of travel/ For facilities with HOV lanes, ten percent is assumed to use HOV lanes.

v/c Ratio - Volume to Capacity Ratio

LOS - Caltrans District 11 procedure was used to estimate the freeway level of service. Designations vary from A to F, with four level of LOS F from F(0) to F(3).

SHORT REPORT

General Information

Analyst

R Peaslee/V Haskell/J Bavos

Agency or Co. Date Performed Time Period

Darnell & Associates 02/09/2006 AM Peak Hour

Intersection Area Type Jurisdiction Analysis Year

Site Information

Fuerte Dr/Avocado Blvd All other areas County of San Diego 2030 w/o Project

Volume and Tir	ming Input					14/5			NB			SB	
			EB			WB		 	L TH	RT	LT	T TH	RT
		LT	TH		LT	TH	RT	LT	1H 2	0	1	2	0
Number of Lane	es	1	1	1	1	1	1	1		1	L	TR	+
Lane Group		L	T	R	L	T	R	L	TR	1	110	810	260
Volume (vph)		130	170		165	355	55	430	935	65		2	200
% Heavy Vehic	les	2	2	2	2	2	2	2	2	2	2		
PHF		0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92		0.92	0.92
Pretimed/Actua	ted (P/A)	Α	A	A	Α	Α	Α	Α	Α	A	A	A	A
Startup Lost Tir		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	1
Extension of Ef			2.0	2.0	2.0	2.0	2.0	2.0	2.0	1-	2.0	2.0	+-
Arrival Type		3	3	3	3	3	3	3	3	1	3	3	-
Unit Extension		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	1	3.0	3.0	+-
Ped/Bike/RTO		0	0	0	0	0	0	0	0	0	0	0	0
Lane Width		12.0	12.0	0 12.0	12.0	12.0	12.0	12.0			12.0	12.0	+
Parking/Grade	/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/Hour										+		+-	+
Bus Stops/Hou	ır .	0	0	0	0	0	0	0	0	+	0	3.2	+-
Minimum Pede			3.2	,		3.2		<u></u>	3.2		1 2 2 2 2	3.2	08
Phasing	EB Only	WB Onl		03		04	Excl. L		NB Only		Thru & RT $G = 47.0$		
Timing	G = 10.0		G = 18.0 G =		G =		$G = 2^{\circ}$		G = 5.0 $Y = 0$		Y = 4.5	Y =	
1	1.0	Y = 4.5 Y =		Y =		Y = 4.				C = 119.9			
Duration of An	nalysis (hrs) = (0.25							CYCIE LE	ongui (

Lane Group Capacity	, Control	Delay	, and L	OS DE	termir	ation				CD
		EB			WB			NB		SB
Adjusted Flow Rate	141	185	152	179	386	60	467	1087	120	1163
Lane Group Capacity	148	155	547	266	280	586	464	1523	323	1339
v/c Ratio	0.95	1.19	0.28	0.67	1.38	0.10	1.01	0.71	0.37	0.87
Green Ratio	0.08	0.08	0.35	0.15	0.15	0.37	0.26	0.43	0.18	0.39
Uniform Delay d ₁	54.7	55.0	28.4	48.2	51.0	24.7	44.3	27.8	43.0	33.6
Delay Factor k	0.46	0.50	0.11	0.24	0.50	0.11	0.50	0.28	0.11	0.40
Incremental Delay d ₂	59.7	133.7	0.3	6.5	191.2	0.1	43.4	1.6	0.7	6.4
PF Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Control Delay	114.4	188.7	28.7	54.7	242.2	24.8	87.6	29.5	43.7	40.0
Lane Group LOS	F	F	С	D	F	С	F	С	D	D
Approach Delay		115.9			167.6			46.9		40.3
Approach LOS		F			F			D		
Intersection Delay		72.3				Interse	ction LC	S		E 2/16/2006

Copyright © 2005 University of Florida, All Rights Reserved

HCS+TM Version 5.2

Generated: 2/16/2006 9:5



SHORT REPORT neral Information Site Information R Peaslee/V Haskell/J Bavos Apalyst Intersection Fuerte Dr/Avocado Blvd Area Type All other areas ency or Co. Darnell & Associates Jurisdiction County of San Diego Date Performed 02/09/2006 Analysis Year 2030 w/o Project Time Period PM Peak Hour ume and Timing Input EB WB NB SB LT TH RT LT TH RT LT TH RT LT TH RT nber of Lanes 1 1 1 1 1 1 1 2 0 1 2 0 Lane Group L Τ Т R L R L TR L TR 75 ume (vph) 80 10 160 170 645 25 1225 135 285 915 95 % Heavy Vehicles 2 2 2 2 2 2 2 2 2 2 2 2 PHF 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 timed/Actuated (P/A) Α Α Α Α Α Α Α Α Α Α Α Α Startup Lost Time 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 ension of Effective Green 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 Amval Type 3 3 3 3 3 3 3 3 3 3 Unit Extension 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 I/Bike/RTOR Volume Õ 0 0 0 0 0 0 0 0 0 0 Lane Width 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 king/Grade/Parking Ν 0 Ν Ν 0 Ν Ν 0 Ν Ν 0 Ν Parking/Hour Bus Stops/Hour 0 0 0 0 0 0 0 0 0 0 imum Pedestrian Time 3.2 3.2 3.2 3.2 Phasing EB Only WB Only 03 04 NB Only Excl. Left Thru & RT 08 G = 6.0G = 15.0G = G = G = 18.0G = 5.0G = 37.0G = Ting Y = 4.5Y = 4.5Y = Y = Y = 4.5Y = 0Y = 4.5Y = Duration of Analysis (hrs) = 0.25Cycle Length C = ane Group Capacity, Control Delay, and LOS Determination EB **WB** NB SB 1479 1098 Adjusted Flow Rate 82 87 11 174 185 701 27 310 1482 1307 le Group Capacity 107 113 536 268 282 600 492 322 v/⊆Ratio 0.77-0.77 0:02 0.65 0.66 1.17 0.05 0.96 1.00 0.84 en Ratio 0.06 0.06 0.34 0.15 0.15 0.38 0.28 0.42 0.18 0.37 Jniform Delay d₁ 45.8 45.8 21.8 39.5 39.6 30.8 26.2 28.5 40.2 28.3 av Factor k 0.32 0.32 0.11 0.23 0.23 0.50 0.11 0.50 0.47 0.38 ncremental Delay da 27.7 27.1 0.0 5.4 5.4 92.8 0.0 22.9 40.1 5.1 Factor 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 trol Delav 73.6 72.9 21.8 45.0 45.0 123.5 26.3 51.3 80.3 33.4 Ε ane Group LOS Ε C D D F C D C roach Delay 70.1 96.9 50.9 43.7

opyright © 2005 University of Florida, All Rights Reserved

Ε

61.0

HCS+TM Version 5.2

Intersection LOS

D

E Generated: 2/16/2006 9:50 AM

D



Approach LOS

rsection Delay

F

I WO- was Diop Come TWO-WAY STOP CONTROL SUMMARY Site Information **General Information** Chase Ave/Chase Ln Intersection V Haskell/J Bavos Analyst County of San Diego Jurisdiction Darnell & Associates, Inc. Agency/Co. 2030 w/o Project Analysis Year 02/09/2006 Date Performed AM Peak Analysis Time Period Project Description 030204-Fuerte Ranch North/South Street: Chase Lane East/West Street: Chase Avenue Study Period (hrs): 0.25 Intersection Orientation: East-West Vehicle Volumes and Adjustments Westbound Eastbound Major Street 6 5 4 3 2 Movement R R T L 735 20 75 390 5 Volume (veh/h) 0.92 0.92 0.92 0.920.92 0.92 Peak-Hour Factor, PHF 5 798 Hourly Flow Rate, HFR 81 21 423 5 (veh/h) 2 2 Percent Heavy Vehicles Undivided Median Type 0 0 RT Channelized 0 1 1 0 1 0 Lanes TR L LTR Configuration 0 0 Upstream Signal Southbound Northbound Minor Street 12 11 10 9 8 7 Movement T R L R T 5 5 5 10 5 80 Volume (veh/h) 0.92 0.92 0.92 0.92 0.92 0.92 Peak-Hour Factor, PHF 5 5 Hourly Flow Rate, HFR 5 10 5 86 (veh/h) 2 2 2 2 2 Percent Heavy Vehicles 2 0 0 Percent Grade (%) Ν Y Flared Approach 0 Storage 0 0 RT Channelized 0 1 0 0 1 0 Lanes LTR LTR Configuration Delay, Queue Length, and Level of Service Southbound

The second secon	Eastbound	I − WestboundI		Νοπηρουπα		` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` `	300ti1200114		-
Approach	Lastbourid	4	7	8	9	10	11	12	ı
Movement	1	4				 	LTR		
Lane Configuration	LTR	L		LTR					-
v (veh/h)	5	21		101			15		
	821	1061		138			171		
C (m) (veh/h)	0.01	0.02		0.73			0.09		_
v/c		0.06		4.26			0.28		
95% queue length	0.02			81.4			28.1		
Control Delay (s/veh)	9.4	8.5					D		•
LOS	Α	Α		F					_
Approach Delay (s/veh)				81.4		<u> </u>	28.1		
				F			D		
Approach LOS		<u> </u>	1	TM		G	enerated: 2/16/2	2006 9:49	F

Copyright © 2005 University of Florida, All Rights Reserved



eneral Information	1		Site I	nformat	tion	······································		
alyst	V Haske	II/J Bavos	Interse			Chana A	/e/Chase L	
ency/Co.		Associates, Inc.	Jurisdi				f San Diego	
ate Performed	02/09/20			sis Year		2030 w/o		
alysis Time Period	PM Peak					2030 W/O	riojeci	
ect Description 03	0204-Fuerte Rar	nch						
ast/West Street: Chas	e Avenue		North/S	South Stre	et: Chase L	ane		* 1) 1)11
rsection Orientation:	East-West			Period (hr		-arre		
enicle Volumes ar	d Adjustmer	ıte		/	0,: 0.20			
ajor Street	Tu /tujuotimor	Eastbound				Westbou	امط	
rement	1	2	3		4	Vvestbot 5	ind I	6
	L	T	R			 		R
lume (veh/h)	5	970	55		5	515		5
k-Hour Factor, PHF	0.92	0.92	0.92		0.92	0.92		0.92
rly Flow Rate, HFR	5	1054						***************************************
eh/h)			59		. 5	559		5
ent Heavy Vehicles	2				2	-		
lian Type				Undivid	led	***************************************		···
Channelized			0					0
es	0	1	0		1	1		0
figuration	LTR				L			
stream Signal		0				0		TR
or Street		Northbound				Southbou	ınd	
ement	7	8	9		10	11	1110	12
	L	Т	R		L	T		R
me (veh/h)	35	5	5		5	5		5
k-Hour Factor, PHF	0.92	0.92	0.92		0.92	0.92		0.92
urly Flow Rate, HFR	38	5						
/h)			. 5		5	5		5
ent Heavy Vehicles	2	2	2		2	2		2
rcent Grade (%)		0				. 0	· · ·	
ed Approach		Y			,	N	T	
orage		1	1		***************************************	0		
Channelized			0			+ -		0
s	0	1	0		0	 		
iguration		LTR	+ -			1 170		0
lay, Queue Length, ar	nd Level of Sen					LTR		
oach	Eastbound	Westbound		Northbour		T		
vement	1			Northbour		-	outhbound	
		4	7	8	9	10	11	12
Configuration	LTR _	L		LTR			LTR	
h/h)	5	5		48			15	
m) (veh/h)	1008	627		80			110	
	0.00	0.01		0.60			0.14	†
queue length	0.01	0.02		2.69		1	0.46	+
ntrol Delay (s/veh)	8.6	10.8		102.3	+	1		+
, (=: 1011)	A	B				1 .	42.8	-
roach Delay (s/veh)				F			Ε	1
				102.3			42.8	
roach LOS			F			F		

TWO-WAY STOP CONTROL SUMMARY

Chase Ave/Fuerte Dr
County of San Diego
2030 w/o Project
, ,
te Drive
1

ehicle Volumes and A	djustments				Westbound		
ajor Street		Eastbound		4	5	6	
ovement	1	2	3	4	T	R	
SV SITIES .	L	· T	R	355	800		
olume (veh/h)		375	5	0.92	0.92	0.92	
eak-Hour Factor, PHF	0.92	0.92	0.92			0	
lourly Flow Rate, HFR	0	407	5	385	869		
veh/h) Percent Heavy Vehicles	0			0			
			Und	ivided		0	
Median Type			0			!	
RT Channelized	0	1	0	1	1	0	
anes	U	+	TR	L	T		
Configuration		0			0		
Jpstream Signal				Southbound			
Minor Street		Northbound	9	10	11	12	
Movement	7	8	R R	L	Т	R	
	L	Т		h			
Volume (veh/h)	5		230	0.92	0.92	0.92	
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92	1	0	
Hourly Flow Rate, HFR	5	. 0	249	0	0	0	
(veh/h)	0	0	0	0	0		
Percent Heavy Vehicles		0			0		
Percent Grade (%)		T N			N		
Flared Approach					0		
Storage		0				0	
RT Channelized			0	0	0	0	
Lanes	0	0	0	- U	+		
Configuration		LR					

Delay, Queue Length, an	d Level of Serv	- Westbound		Northbound		S	outhbound	
Approach	Eastbound	westbound		8	9	10	11	12
Movement	1	4	/					
ane Configuration		L		LR				1
/ (veh/h)		385		254				
		1158		501				
C (m) (veh/h)		0.33		0.51				+
V/C		1.47		2.83				-
95% queue length		9.6		19.3				
Control Delay (s/veh)		A		С				
LOS				19.3				
Approach Delay (s/veh)		-		C				
Approach LOS			<u> </u>	HCS+TM Vers		Ge	enerated: 2/16	/2006 9:

Copyright © 2005 University of Florida, All Rights Reserved



General Information	<u> </u>		Site I	nformatio	on		***************************************	
A m alyst	V Haskeli	VJ Bavos	Interse			Chase Av	e/Fuerte Di	
A ency/Co.		Associates, Inc.	Jurisdi				San Diego	
Date Performed	02/09/200			is Year	· · · · · · · · · · · · · · · · · · ·	2030 w/o		
Analysis Time Period	PM Peak							
P ject Description 030	0204-Fuerte Ran	ch					i	
East/West Street: Chase	e Avenue		North/S	South Stree	t: Fuerte D)rive		\$
Intersection Orientation:	East-West			Period (hrs)				
V hicle Volumes an	d Adjustmen	te						
Major Street	, a / tajaotinon	Eastbound				Westbou	nd	
Mevement	1	2	3		4	5	iiu i	6
	L .	T	R		Ĺ	1		R
Volume (veh/h)		970	5		175	565		
P ⇔ k-Hour Factor, PHF	0.92	0.92	0.92	?	0.92	0.92		0.92
Harrly Flow Rate, HFR (veh/h)	0	1054	- 5		190	614		0
Percent Heavy Vehicles	0				0			
M dian Type				Undivide		_1	1	
RT Channelized			0					0
Lanes	0	1	0		1	1		0
Cifiguration			TR		L	 		
Upstream Signal		0				0		
Minor Street		Northbound				Southbou	und	
M rement	7	8	9		10	11	inu i	12
	L	T	R		L	 		R
√etume (veh/h)	10		235		<u> </u>			. J. X
e k-Hour Factor, PHF	0.92	0.92	0.92		0.92	0.92		0.92
Hourly Flow Rate, HFR (veh/h)	10	0	255		0	0		0
Percent Heavy Vehicles	0	0	0		0	0		0
⊃ercent Grade (%)		0	<u> </u>			0		
Flared Approach		T N				T N		
torage		0				_		
RT Channelized			-			0		
	0		0			<u> </u>		0
_a es Ca figuration		0	0		0	0		0
		LR				<u> </u>		
Delay, Queue Length, ar			T			·		
roach	Eastbound	Westbound		Northbound			Southbound	
A wement	1	4	7	8	9	10	11	12
_ane Configuration		L		LR				
/ eh/h)		190		265				
C (m) (veh/h)		665		230				
1/6		0.29		1.15				
//c. }5 queue length		1.18		12.39				
Control Delay (s/veh)		12.6		151.3				
.(6)		В		F				
ار roach Delay (s/veh)				<u> </u>			<u> </u>	
				151.3	·			
\pproach LOS			· .	F	•	1		

TWO-WAY STOP CONTROL SUMMARY

or ight © 2005 University of Florida, All Rights Reserved

HCS+[™] Version 5.2

Generated: 2/16/2006 9:47 AM



	TWC	-WAY STOP			1 1				
eneral Information	·			ormation			- /Daman		
nalyst	R Peaslee/J		Intersecti			Fuerte Farm			
rgency/Co.		ssociates, Inc.	Jurisdiction			County of Sa 2030 w/o Pr			
Date Performed	02/09/2006		Analysis	Year		2030 W/0 FI			
Analysis Time Period	AM Peak					<u> </u>			
roject Description 0302	04-Fuerte Ranch		h	th Chaoti	Domon I n				
ast/West Street: Fuerte F	-arms Rd			uth Street:			· · · · · · · · · · · · · · · · · · ·		
ntersection Orientation: N	North-South		Study Pe	riod (hrs):	0,20				
/ehicle Volumes and	Adjustments		. Y			Southbound			
Major Street		Northbound				5		6	
Movement	1	2	3		4	T		R	
	L	T	R		<u> </u>	10		0	
/olume (veh/h)	15	10	0.92		0.92	0.92	0.	92	
Peak-Hour Factor, PHF	0.92	0.92	-			0		0	
Hourly Flow Rate, HFR	16	0	5	1	0	U			
veh/h) Percent Heavy Vehicles	2		-		0				
				Undivided					
Median Type RT Channelized			0					0	
	0	1	0		0	1		0	
Lanes	LT							TR	
Configuration Upstream Signal		0				0			
		Eastbound				Westboun	d		
Minor Street	7	8	9		10	11		12	
Movement	Ĺ	Т	R		L	T		R	
Maluma (uph/h)	15		5						
Volume (veh/h) Peak-Hour Factor, PHF	0.92	0.92	0.92		0.92	0.92	- ().92	
Hourly Flow Rate, HFR		10	0		16	10		0	
(veh/h)	0					0		0	
Percent Heavy Vehicles	2	0	0		0	0		<u> </u>	
Percent Grade (%)		0							
Flared Approach		N				N			
Storage		0				0			
RT Channelized			0					0	
Lanes	0	0	0		0	0		0	
Configuration		LR							
Delay, Queue Length, a	nd Level of Serv	rice							
Delay, Queue Length, an Approach	Northbound	Southbound		Westbound			Eastbound		
	1	4	7	8	9	10	11	12	
Movement	LT						LR		
Lane Configuration	16	1					21		
v (veh/h)							975		
C (m) (veh/h)	1610		-			+	0.02		
v/c	0.01				-		0.07	1	
95% queue length	0.03					_	8.8	+	
a I Delevi (alveb)	7.3	1	I	1	1	1	0.0		

Copyright © 2005 University of Florida, All Rights Reserved

7.3

Α

HCS+TM Version 5.2

Generated: 2/16/2006 9:47 Al

Α

8.8

Α

Approach LOS

LOS

Control Delay (s/veh)

Approach Delay (s/veh)

	Т	WO-WAY STO	P CONTR	OL SU	MMARY			
General Information)		Site I	nforma	ation			
A alyst	J Bavos		Interse	ection		Fuerte Fa	rms/Damoi	7
Agency/Co.	Darnell 8	Associates, Inc.	Jurisd		•		San Diego	
Date Performed	02/09/20		Analys	sis Year		2030 w/o		
A alysis Time Period	Midday F							
ect Description 030		nch						
East/West Street: Fuerte					reet: <i>Damon</i> i	Ln		7.f
n rsection Orientation:			Study	Period (I	nrs): 0.25		. ,	7.4
√enicle Volumes an	d Adjustmer	its						
Major Street		Northbound				Southbou	ınd	
<u>vl</u> vement	1	2	3		4	5		6
Inlumes (web/b)		T	R		<u>L</u>	Т		R
/olume (veh/h)	5 0.92	10 0.92		-	0.00	10		65
Herry Flow Rate, HFR			0.92		0.92	0.92		0.92
veh/h)	16	0	10		0	0		0
ent Heavy Vehicles	2				0			
∕l lian Type				Undiv	rided			
RT Channelized			0					0
.a es	. 0	1	0		0	1		0
Configuration	· LT			·				TR
Jpstream Signal		0			·	. 0		-
n or Street		Eastbound	. •			Westbou	nd	
/lerement	7	8	9		10	11		12
	. L	Т	R		L	Т		[†] R
/cume (veh/h)	15		10					\$.
k-Hour Factor, PHF	0.92	0.92	0.92	?	0.92	0.92		0.92
lourly Flow Rate, HFR v ⇔ /h)	0	10	70		5	10		0
ent Heavy Vehicles	2	0	0		0	0		0
Percent Grade (%)		0				0	L	
la ed Approach		N				N		
torage		0				0		
₹T Channelized			0					0
aes	0	0	0		0	0		0
.a.es >cfiguration		LR				1.		
elay, Queue Length, ar	nd Level of Serv	/ice						
roach	Northbound	Southbound		Westbo	und		Eastbound	
1ovement	1	4	7	8	9	10	11	12
ane Configuration	LT						LR	'
(eh/h)	5						26	
; (m) (veh/h)	1518						972	
	0.00		 				0.03	
5 queue length	0.01			-			0.03	
control Delay (s/veh)	7.4		<u> </u>	 			8.8	
discourse (arven)	7.4 A		1	 	- 	-		
pproach Delay (s/veh)	- A		 	L	<u>_</u>		A	1
pproach LOS			 			 	8.8	
Name Office LOO		,	1			1	A	

ght © 2005 University of Florida, All Rights Reserved

HCS+[™] Version 5.2

Generated: 2/16/2006 9:46 AM



WU- Way Dup Come

eneral Information nalyst gency/Co. Pate Performed nalysis Time Period roject Description 030204-F ast/West Street: Fuerte Farm ntersection Orientation: Nort /ehicle Volumes and Act //ajor Street //ovement	ns Ra th-South		Site Information Intersection Jurisdiction Analysis Ye North/South Study Perior 3 R 0.92		non Ln	uerte Farms/. ounty of San 030 w/o Proje Southbound 5 T 10	Diego ect 6 R	
gency/Co. Pate Performed Inalysis Time Period Iroject Description 030204-F Inast/West Street: Fuerte Farm Intersection Orientation: North Irehicle Volumes and Act Ironalization Street Ironalization	Darnell & Ass 02/09/2006 PM Peak Hou Fuerte Ranch ms Rd th-South djustments 1 L 5 0.92 10	Northbound 2 T 10 0.92	Jurisdiction Analysis Ye North/South Study Perio	a Street: Dar d (hrs): 0.25	mon Ln	Southbound T	6 R	
Pate Performed Inalysis Time Period Iroject Description 030204-F Inast/West Street: Fuerte Farm Intersection Orientation: Nort Irehicle Volumes and Act Irajor Street Irovement Ironical Ironica	02/09/2006 PM Peak Hou Fuerte Ranch ms Rd th-South djustments 1 L 5 0.92 10	Northbound 2 T 10 0.92	Analysis Ye North/South Study Perio	ar Street: Dar d (hrs): 0.25	mon Ln	Southbound 5 T	6 R 10	
Pate Performed Inalysis Time Period Iroject Description 030204-F Inast/West Street: Fuerte Farm Intersection Orientation: Nort Irehicle Volumes and Act Irajor Street Irovement Ironical Ironica	PM Peak Hou Fuerte Ranch ms Rd th-South djustments 1 L 5 0.92 10	Northbound 2 T 10 0.92	North/South Study Perio	n Street: Dar d (hrs): 0.25		5 T	10	
roject Description 030204-h ast/West Street: Fuerte Farm ntersection Orientation: Nort /ehicle Volumes and Ac //ajor Street //ovement //olume (veh/h)	Fuerte Ranch ms Rd th-South djustments 1 L 5 0.92 10	Northbound 2 T 10 0.92	Study Perio	d (hrs): 0.25		5 T	10	
ast/West Street: Fuerte Farm ntersection Orientation: Nort /ehicle Volumes and Ac //ajor Street //ovement	ns Ra th-South djustments 1 L 5 0.92 10	2 T 10 0.92	Study Perio	d (hrs): 0.25		5 T	10	
ast/West Street: Fuerte Farm ntersection Orientation: Nort /ehicle Volumes and Ac //ajor Street //ovement	ns Ra th-South djustments 1 L 5 0.92 10	2 T 10 0.92	Study Perio	d (hrs): 0.25		5 T	10	
Vehicle Volumes and Activation Street Movement Volume (veh/h)	1 L 5 0.92	2 T 10 0.92	3 R	4 L		5 T	10	
Major Street Movement Volume (veh/h)	1 L 5 0.92	2 T 10 0.92	R	L		5 T	10	
Major Street Movement Volume (veh/h)	1 L 5 0.92	2 T 10 0.92	R	L		T	10	
/olume (veh/h)	L 5 0.92 10	T 10 0.92	R	L			10	
/olume (veh/h)	0.92 10	10 0.92		0.03		10		
/olume (veh/h)	0.92 10	0.92	0.92	0.02				
	10		0.52	ı U.92	1 :	0.92	0.92	2
Peak-Hour Factor, PHF		0				0	0	
Hourly Flow Rate, HFR veh/h)	2		0	0				
Percent Heavy Vehicles				Individed				
Median Type			1 0	Marviaca			0	
RT Channelized			1			1	0	
Lanes	0	1	0				TF	₹
Configuration	LT					0		
Upstream Signal		0				Westbound		
Minor Street		Eastbound				11	1 1	2
Minor Street Movement	7	8	9	11		T		R
Movement	L	Т	R					
(to by b)	10		0			0.92	0.9	92
Volume (veh/h) Peak-Hour Factor, PHF	0.92	0.92	0.92	0.9	2			
Hourly Flow Rate, HFR	0	10	10	5		0		0
(veh/h) Percent Heavy Vehicles	2	0	0		0			
	·	0				0		
Percent Grade (%)		N				N		
Flared Approach		0				0		
Storage			0					0
RT Channelized		0	0)	0		0
Lanes	0	LR						
Configuration								
Delay, Queue Length, and	Level of Serv	ice	1	Vestbound		E	astbound	
Approach	Northbound	Southbound		8	9	10	41-	12
Movement	1	4	7	<u> </u>		1.5	LR	
Lane Configuration	LT					-	10	
	5					-	975	-
v (veh/h)	1596						<u> </u>	-
C (m) (veh/h)	0.00						0.01	
v/c		-					0.03	
95% queue length	0.01	<u> </u>					8.7	
Control Delay (s/veh)	7.3					-	Α	
LOS	Α						8.7	
Approach Delay (s/veh)	-					-	Α	

Approach LOS -Copyright © 2005 University of Florida, All Rights Reserved

HCS+TM Version 5.2

Generated: 2/16/2006 9:46 /



	TV	VO-WAY STOP	CONTR	OL SUMN	MARY				
Seneral Information			Site I	nformatic	n				
Alyst	R Peaslee	e/J Bavos	Interse	ection		Fuerte Drive/Fuerte Farm			
Agency/Co.	Darnell & .	Associates, Inc.	Jurisd	iction	on County of San Diego				
Date Performed	02/09/200	6	Analys	sis Year		2030 w/o			
Alysis Time Period	AM Peak								
	204-Fuerte Rand	ch							
ast/West Street: Fuerte			North/S	South Street	t: Fuerte F	-arms			
rsection Orientation:	East-West		Study	Period (hrs):	0.25			14.11	
enicle Volumes and	Adjustment	ts							
aior Street	1	Eastbound	ound			Westbou	nd		
rement	1	2	3		4	5		6	
	L	T	R		L			R	
olume (veh/h)		330	25		5	435			
k-Hour Factor, PHF	0.92	0.92	0.92	2	0.92	0.92		0.92	
erly Flow Rate, HFR eh/h)	• 0	358	27		5	472		0	
cent Heavy Vehicles	0				2				
lian Type				Undivided	d				
T Channelized			0					0	
es	0	1	0	0 0		1		0	
figuration			TR	LT					
pstream Signal		0	1			0			
or Street		Northbound				Southbou	ınd		
ement	7	8	9		10	11	inu i	12	
	L	T	R		L			R	
me (veh/h)	110		10						
k-Hour Factor, PHF	0.92	0.92	0.92	,	0.92	0.92		0.92	
ourly Flow Rate, HFR	119	0	10						
<u>h</u> /h)					0	0		0	
ent Heavy Vehicles	2	0	2		0	-0		0	
ercent Grade (%)		0	-	·		0			
ed Approach		N				N			
torage		0				0			
T Channelized			0					0	
es	0	0	0		0	0		0	
Afiguration :		LR							
elay, Queue Length, and	Level of Servi	ice							
roach	Eastbound	Westbound		Northbound		T .	Southbound	<u> </u>	
ovement	1	4	7	8	9	10	. 11	12	
ne Configuration		LT	•	LR	 	1 10	. 11	1 12	
eh/h)		5		 	 	+		 	
(m) (veh/h)				129	-				
(m) (ven/n)		1173		342					
		0.00		0.38			·		
queue length		0.01		- 1.71					
ontrol Delay (s/veh)		8.1		21.8					
		Α		С					
proach Delay (s/veh)			**************************************	21.8	1			-L	
· / /									



wo-way Stop Control TWO-WAY STOP CONTROL SUMMARY Site Information General Information Fuerte Drive/Fuerte Farms Intersection R Peaslee/J Bavos County of San Diego Analyst Jurisdiction Darnell & Associates, Inc. 2030 w/o Project Agency/Co. Analysis Year 02/09/2006 Date Performed Analysis Time Period PM Peak 030204-Fuerte Ranch Project Description Fuerte Farms North/South Street: East/West Street: Fuerte Drive Study Period (hrs): 0.25 East-West Intersection Orientation: Vehicle Volumes and Adjustments Westbound Eastbound 6 5 Major Street 4 3 2 R T Movement R L 170 10 55 215 0.92 Volume (veh/h) 0.92 0.92 0.92 0.92 0.92 Peak-Hour Factor, PHF 0 184 10 59 Hourly Flow Rate, HFR 233 0 __ 2 veh/h) 0 Percent Heavy Vehicles Undivided 0 Median Type 0 0 RT Channelized 1 0 0 1 0 Lanes LT TR 0 Configuration 0 Upstream Signal Southbound Northbound 12 11 Minor Street 10 9 7 8 R T Movement L R T L 10 30 0.92 Volume (veh/h) 0.92 0.92 0.920.92 0.92 Peak-Hour Factor, PHF 0 0 0 10 Hourly Flow Rate, HFR 0 32 0 0 (veh/h) 0 2 0 2 Percent Heavy Vehicles 0 0 Percent Grade (%) N Ν Flared Approach 0 0 0 Storage 0 RT Channelized 0 0 0 0 0 _anes LR Configuration Delay, Queue Length, and Level of Service Southbound Northbound Westbound Eastbound 12 11 Approach 10 9 8 7 4 1 Movement LR LT _ane Configuration 42 10 v (veh/h) 592 1270 C (m) (veh/h) 0.07

0.01 v/c 0.23 0.02 95% queue length 11.5 7.9 Control Delay (s/veh) В Α OS 11.5 Approach Delay (s/veh) В Approach LOS Generated: 2/16/2006

Copyright © 2005 University of Florida, All Rights Reserved



	TV	VO-WAY STOP	CONTRO	DL SU	MM.	ARY				
Seneral Information			Site In	forma	atio	n				
4 alyst	R Peaslee	e/V Haskell/J Bavos	Interse	ction			Fuerte/Cha	ase Ln		
\gency/Co.	Darnell &	Associates Inc.	Jurisdic	ction			County of	San Di	ego	
Date Performed	02/09/200	6	Analysi	s Year			2030 w/o l	⊃roject		
Alysis Time Period	AM Peak									
reject Description 030		ms							- 4,	
ast/West Street: Fuerte						Chase La				
rsection Orientation:			Study P	eriod (nrs):	0.25			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
'enicle Volumes an	<u>d Adjustment</u>					ž.				
laior Street		Eastbound					Westbour	nd		
1 rement	1 1	2 T	3			4	5			6
'olume (veh/h)	65	250	R 5				T 335			R
'k-Hour Factor, PHF	0.92	0.92	0.92			0.92	0.92			15 .92
rly Flow Rate, HFR										
/eh/h)	70	271	5			5	364		1	16
ent Heavy Vehicles	2					2				
1 ian Type				Undiv	<i>rided</i>					
₹T Channelized			0							0
a es	0	1	0			0	1			0
figuration	LTR					LTR				
Ipstream Signal		0		<u>. </u>			0			
n or Street		Northbound					Southbou	nd		
1 ement	7	8	9			10	11			12
	L	Т	R			L	T			R ·
'c ime (veh/h)	10	5	5			10	5		90	
New K-Hour Factor, PHF lourly Flow Rate, HFR	0.92	0.92	0.92			0.92	0.92		0.92	
veh/h)	10	5	5		10		5		97	
ent Heavy Vehicles	2	2	2			2	2		2	
'ercent Grade (%)		0					0			
la ed Approach		N					N			
torage		0					0			
₹T Channelized			0							0
.a es	0	1	0		-	0	. 1			0
a es Configuration		LTR					LTR			
7,							,			
roach	Eastbound	Westbound		Northbo	ound			outhbo	~~~~	
Novement	1	4	7	8		9	10	11		12
are Configuration	LTR	LTR		LTF	?			LTF	7	
(eh/h)	70	. 5	•	20				112	2	
; (m) (veh/h)	1178	1287		294				570	2	
/@	0.06	0.00		0.07	7			0.20	0	
5 queue length	0.19	0.01		0.22	2			0.7	2	
control Delay (s/veh)	8.2	7.8		18.1	1		*	12.	9	
	Α	Α		С				В		
pproach Delay (s/veh)				18.1	1	L		12.9		· · · · · · · · · · · · · · · · · · ·
peroach LOS				C				B		
		LL.					<u> </u>			

ight © 2005 University of Florida, All Rights Reserved

HCS+TM Version 5.2

Generated: 2/16/2006 9:44 AM



	1110	-WAY STOP C	Site Info					
eneral Information						Fuerte/Chas	e I n	
nalyst		Haskell/J Bavos	Intersectio		County of Sa			
gency/Co.	Darnell & Ass	sociates Inc.	Jurisdiction			030 w/o Project		
ate Performed	02/09/2006		Analysis Y	ear		2000 1110		
nalysis Time Period	PM Peak							
oject Description 03020	4 - Fuerte Farms		Morth/Sout	th Street: C	Chase Lar	ne		
ast/West Street: Fuerte Di	rive		Study Peri		.25			
tersection Orientation: Ea			Otady i on	0/				
ehicle Volumes and <i>i</i>	Adjustments		T W			Westbound	Ė	
ajor Street		Eastbound	3		4	5		6
ovement	1	2 T	R		L	Τ		R
	L 20	245	5	1	0	160		0
olume (veh/h)	30 0.92	0.92	0.92	0.	92	0.92	0.	92
eak-Hour Factor, PHF			5	1	10	173		0
ourly Flow Rate, HFR veh/h)	32	266			2			
ercent Heavy Vehicles	2			Undivided	<i>L</i>			
ledian Type				Uriaiviaea				0
T Channelized			0		0	1		0
anes	0	1	0		TR ,			
Configuration	LTR				111	0.		
Jpstream Signal		0				Southbou	nd	
Minor Street		Northbound	1 0		10	11		12
Movement	7	- 8	9 R		L	T		R
	L	T	5		50	5		15
/olume (veh/h)	10	10	0.92		0.92	0.92	().92
Peak-Hour Factor, PHF	0.92	0.92				5	16	
Hourly Flow Rate, HFR (veh/h)	10	10	5		54	2		2
Percent Heavy Vehicles	2	2	2		2	0		
Percent Grade (%)		0				T N		
Flared Approach		N				0		
Storage		0				U		0
RT Channelized			0			1		0
Lanes	0	1	0		0	LTR		
Configuration		LTR				LIN		
Delay, Queue Length, an	d Level of Serv	ice				· · · · · · · · · · · · · · · · · · ·	Southbound	
Approach	Eastbound	Westbound		Northbound				12
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LTR	LTR		LTR			LTR	
	32	10		25			75	-
v (veh/h)	1392	1292		474			483	
C (m) (veh/h)	0.02	0.01		0.05			0.16	
v/c		0.02		0.17			0.55	
95% queue length	0.07	7.8		13.0			13.8	
Control Delay (s/veh)	7.6			B			В	
LOS	A	A		13.0	1		13.8	
Approach Delay (s/veh)		-					В	
Approach LOS				HCS+TM Vers			Senerated: 2/16	/2006 9

Copyright © 2005 University of Florida, All Rights Reserved



	TW	O-WAY STOP	CONTRO	L SUN	MARY			
Seneral Information			Site In	format	tion			
₹ lyst	R Peaslee	N Haskell/J Bavos	Intersed	ction		Damon/Fu	erte	
Agency/Co.	Darnell & /	Associates Inc	Jurisdic	tion			San Diego	
Date Performed	02/09/200	6	Analysi	s Year		2030 w/o l	Project	
All lysis Time Period	AM Peak							
reject Description 030		ทร						2 . V 2 . V
ast/West Street: Fuerte					eet: Damo	n Lane	· · · · · · · · · · · · · · · · · · ·	isti i
section Orientation:			Study P	eriod (hr	s): 0.25			
/enicle Volumes and	d Adjustment							
Major Street		Eastbound			· · · · · · · · · · · · · · · · · · ·	Westbour	nd	
/le ement	1	2 T	3 R		4	5 T		6 R
/olume (veh/h)	90	225	35		15	435		25
reak-Hour Factor, PHF	0.92	0.92	0.92		0.92	0.92		0.92
derly Flow Rate, HFR						•		
veh/h)	97	244	38		16	472		27
ent Heavy Vehicles	2				2			
//elian Type			·	Undivid	ded			
₹T Channelized			0					0.
.a es	0	1	0		0	1		0
diguration	LTR				LTR			
Jpstream Signal		0				0		
/limbr Street		Northbound				Southbou	nd	· · · · · · · · · · · · · · · · · · ·
//cement	7	8	. 9		10 11			. 12
	L	Т	R		L	T		R
/d me (veh/h)	20	. 5	25		15	5		15
ek-Hour Factor, PHF Hourly Flow Rate, HFR	0.92	0.92	0.92		0.92	0.92		0.92
veh/h)	21	5	27		16	5		16
ent Heavy Vehicles	2	2	2		2	2		2
ercent Grade (%)		0				0		
Placed Approach	·	N				N		
torage		0				0		
RT Channelized	:	·	0					0
.a es	0	1	0		. 0	1		0
.a.es Cofiguration		LTR				LTR		
elay, Queue Length, ar	nd Level of Servi	ice						
\r roach	Eastbound	Westbound	· · · · · · · · · · · · · · · · · · ·	Northbou	und	S	Southbound	
Novement	1	4	7	8	9	10	11	12
age Configuration	LTR	LTR		LTR			LTR	T
(eh/h)	97	16		53			37	
(m) (veh/h)	1065	1280		321			277	
/(m) (\(\frac{1}{2}\)	0.09	0.01		0.17		•	0.13	
15 queue length	0.30	0.04		0.77	_		0.46	
Control Delay (s/veh)	8.7	7.8		18.4			20.0	
.C	6.7 A	7.8 A		C C			20.0	1
Approach Delay (s/veh)		A		18.4		·	20.0	<u> </u>
							C 20.0	
Approach LOS				С			U.	

ght © 2005 University of Florida, All Rights Reserved



wo-way Stop Control TWO-WAY STOP CONTROL SUMMARY Site Information **General Information** Damon/Fuerte R Peaslee/V Haskell/J Bavos Intersection County of San Diego Analyst Jurisdiction Darnell & Associates Inc 2030 w/o Project Agency/Co. Analysis Year 02/09/2006 Date Performed MID Peak Analysis Time Period 030204 - Fuerte Farms Project Description Damon Lane North/South Street: East/West Street: Fuerte Dr 0.25 Study Period (hrs): East-West Intersection Orientation: Vehicle Volumes and Adjustments Westbound Eastbound 6 Major Street 5 4 3 R T Movement L R T L 30 220 15 35 130 70 0.92 Volume (veh/h) 0.92 0.92 0.92 0.92 Peak-Hour Factor, PHF 0.92 32 239 16 Hourly Flow Rate, HFR 38 141 76 --(veh/h) 2 __ 2 Percent Heavy Vehicles Undivided 0 Median Type 0 0 RT Channelized 1 Ō 0 1 0 Lanes LTR LTR Configuration 0 0 Upstream Signal Southbound Northbound 12 Minor Street 11 10 9 8 7 R Movement T L R L 20 5 15 40 5 15 0.92 Volume (veh/h) 0.92 0.92 0.92 0.92 0.92 Peak-Hour Factor, PHF 21 5 16 Hourly Flow Rate, HFR 43 5 16 2 2 (veh/h) 2 2 2 2 Percent Heavy Vehicles 0 0 Percent Grade (%) Ν Ν Flared Approach 0 0 Storage 0 0 0 RT Channelized 1 0 0 1 0 LTR Lanes LTR Configuration

Delay, Queue Length, an	d Level of Serv	Westbound -		Northbound			Southbound	
Approach ,	Eastbound	Avestoenha	7	8	9	10	11	. 12
Novement	1	4					LTR	
ane Configuration	LTR	LTR		LTR			42	
(veh/h)	76	16		64			490	
C (m) (veh/h)	1292	1397		607			0.09	
//c	0.06	0.01		0.11		 	0.28	
95% queue length	0.19	0.03		0.35			13.0	
Control Delay (s/veh)	8.0	7.6		11.6			B	+
LOS	Α	A		В	<u> </u>		13.0	ــــــــــــــــــــــــــــــــــــــ
Approach Delay (s/veh)				11.6			13.0 B	
Approach LOS			<u></u>	В		1	enerated: 2/16/	2006 9

Copyright © 2005 University of Florida, All Rights Reserved

HCS+TM Version 5.2



General Information

			10.100 11		U				
alyst	R Peasle	Interse	ction		Damon/Fuerte				
ency/Co.	Darnell &	Associates Inc	Jurisdi	ction			f San Diego)	
Date Performed	02/09/200		Analys	is Year		2030 w/o			
alysis Time Period	PM Peak								
	0204 - Fuerte Fa	rms						e.	
ast/West Street: Fuerto			North/S	South Stree	et: <i>Damon</i>	Lane			
rsection Orientation:			Study F	Period (hrs): 0.25		5.	V.	
ehicle Volumes an	d Adjustmen	ts							
ajor Street		Eastbound				Westbou	ınd		
vement	11	2	3		4	5		6	
olumo (voh/h)	<u> </u>	T 105	R		L	Т		R	
olume (veh/h)	5 0.92	195	10		10	155		5	
k-Hour Factor, PHF Jrly Flow Rate, HFR		0.92	0.92		0.92	0.92		0.92	
eh/h)	5	211	10		10	168		5	
cent Heavy Vehicles	2				2	 -			
dian Type				Undivide		·			
T Channelized			0					0	
es	. 0	1	0		0	1		0	
figuration	LTR				LTR				
pstream Signal		0				0			
or Street		Northbound				Southboo	und		
rement	. 7	8	9	•	10	11		12	
	L	Τ.	R		L	Т		R	
ıme (veh/h)	5	5	10		5	5	14	. 15	
k-Hour Factor, PHF	0.92	0.92	0.92		0.92	0.92		0.92	
ourly Flow Rate, HFR ➡ı/h)	5	5	10		5	5		16	
cent Heavy Vehicles	2	2	2		2	2		2	
ercent Grade (%)		. 0				. 0			
ed Approach		N		, , , , , , , , , , , , , , , , , , ,		I N			
torage		0				0			
Γ Channelized			0					0	
es	0	1	0		0	1		0	
figuration		LTR				LTR			
elay, Queue Length, ar	nd Level of Serv	ice							
roach	Eastbound	Westbound	1	Northboun	d		Southbound		
ovement	1	4	7	8	9	10	11	12	
ne Configuration	LTR	LTR		LTR	1	 	LTR	1 '-	
eh/h)	5	10		20	1	 	26	+	
(m) (veh/h)	1404	1348		637	 		694	 	
	0.00	0.01		0.03		 	0.04	┼	
queue length	0.01	0.02		0.03	 	1	ļ	 	
entrol Delay (s/veh)	7.6	7.7	<u> </u>		1	·	0.12	 	
Side Color (Siveri)	7.0 A			10.8	-	-	10.4	<u> </u>	
proach Delay (s/veh)		A		B	1		В	1	
	 .			10.8		ļ <u>.</u>	10.4		
proach LOS				В			В		

TWO-WAY STOP CONTROL SUMMARY

Site Information

/**5**/2006

117

			1	Site Info	rmation						
	D						o Dr/Avor	ado F	Blvd		
Associate ⁄2006			1	Area Type Jurisdiction Analysis Year All other areas County of San Diego Analysis Year 2030 w/ Project							
K / 10 G.									7	SR	,
	EB			WB		-; -		DT	+ 1 + 1		RT
LT	TH	RT									0
1	1	1	1								
L	T ·	R	L				 	60			260
130	172	140					1				2
2	2	2					 				0.92
0.92	0.92	0.92	0.92	0.92							A
Α	Α	Α	Α	Α				A			
2.0	2.0	2.0	2.0								
2.0	2.0	2.0	2.0							<u> </u>	1
. 3	3	3	3								1
3.0	3.0	3.0	3.0	3.0						0	0
0	0	0						0			1
12.0	12.0	12.0						N		0	N
N	0	N	I N	0	I N	IN		1			
				<u> </u>	1	0	10	+	0	0	
0		0	10	<u> </u>	1 -	+		+-		3.2	
<u> </u>	ــــــــــــــــــــــــــــــــــــــ	<u> </u>			Excl	eft		, 1	Thru & RT		08
) 4		.9	G = 5.0				
			Y =		Y = 4.3	5	Y = 0				
0.25							Cycle Le	ngın c	, - 110.0		
Contro	ol Dela	ay, and	LOS D	etermi	nation	т	ND			SB	
	EB			WB		┼		Ť	101	1163	
141	187	152	185	393	62	467			121	1000	
148	155	547	266	280	586	464	1523		323		
0.95	1.21	0.28	0.70	1.40	0.11	1.01	0.72				
	0.08	0.35	0.15	0.15	0.37	0.26	0.43				-
			48.3	51.0	24.7	44.3	27.9		43.0		_
			0.26	0.50	0.11	0.50	0.28		0.11		
			7.7	201.7	0.1	43.4	1.6		0.7	6.4	
						1.00	0 1.000				_
114.4				252.7	24.8	87.6	29.5		43.7		}
1, 17.		C	E	F	С	F	С		D	D	
	F	1 1	1							2	
F	118			173.8	3	1	47.0			40.3	3
F	118	.0			3		47.0 D			40.S	
F		.0		173.8 F		ection I	D				
	Associate (2006 ak Hour) LT	EB LT TH 1 1 1 7 130 172 2 2 0.92 0.92 A A A 2.0 2.0 2.0 2.0 2.0 2.0 3 3 3.0 3.0 0 0 12.0 12.0 N 0 12.0 12.0 N 0 12.0 12.0 N 0 12.0 12.0 N 0 12.0 12.0 N 0 12.0 12.0 N 12.0 12.0 12.0 N 12.0 12.0 12.0 N 12.0 12.0 12.0 N 12.0 12.0 12.0 N 0 12.0 12.0 N 0 12.0 12.0 N 0 12.0 12.0 N 0 12.0 12.0 N 0 12.0 12.0 N 0 12.0 12.0 12.0 N 0 12.0 12.0 N 0 12.0 12.0 N 0 12.0 12.0 N 0 12.0 12.0 N 0 12.0 12.0 N 0 13.2 WB Only	Second color	Second color Seco	Area Typy Jurisdict Analysis EB	Area Type Jurisdiction Analysis Year	Real Type	Area Type Jurisdiction Analysis Year Area Type Jurisdiction Analysis Year	Area Type Jurisdiction Analysis Year Area Type Jurisdiction Analysis Year	Area Type Jurisdiction Analysis Year Area Type Jurisdiction Analysis Year	Resociates Area Type Jurisdiction Analysis Year Southy of San Diego 2030 w/ Project

SHORT REPORT

Copyright © 2005 University of Florida, All Rights Reserved



		<u> </u>		SHC	ORT RI	EPOR1	ĺ						
eneral Information				0110			ormatio	n					
R Peaslee/V Halyst Lency or Co. Darnell & A Date Performed 02/09/ Time Period PM Pea	\ssociate ⁄2006		S			Intersect Area Ty Jurisdic Analysis	pe tion	Col	e Dr/Avo All other a unty of Sa 2030 w/ F	areas an Die	ego		
olume and Timing Input												SB	
June and Thing input		EB				WB		LT	NB TH	RT	+ 1.7	TH	RT
	LT	TH	4	RT	LT	TH	RT 1	1	2	0	1 1	2	0
umber of Lanes	1	1	4	1	1	1			TR		L	TR	
_ane Group	L	T		R	L	T	- R	L 25	1225	142	287	915	95
olume (vph)	75	89	\perp	10	163	173	646		2	2	2	2	2
% Heavy Vehicles	2	2		2	2	2	2	2		0.92	0.92	0.92	0.92
BHF	0.92	0.92	2	0.92	0.92	0.92	0.92	0.92	0.92	0.92 A	A	A	A
retimed/Actuated (P/A)	Α	A		Α	Α	Α	Α	A	A	A	2.0	2.0	
Startup Lost Time	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	-	2.0	2.0	
xtension of Effective Green	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0			3	-
Arrival Type	3	3		3	3	3	. 3	3	3		3	3.0	-
Unit Extension	3.0	3.0)	3.0	3.0	3.0	3.0	3.0	3.0	<u> </u>	3.0	0	0
Ped/Bike/RTOR Volume	0	0		0	0	0	0	0	0	0	0	12.0	+
Lane Width	12.0	12.	0	12.0	12.0	12.0	12.0	12.0	12.0	N	12.0 N	0	N
Parking/Grade/Parking	N	0		N	N	0	N	N	10	 '\		+	+
Parking/Hour						<u> </u>	+-	0	0	+-	- 0	0	+
Bus Stops/Hour	0	-0		0	0	0	0	10	3.2	-	4.	3.2	1
Minimum Pedestrian Time		3.2	2			3.2	Excl. I	off I	NB Only	,	Thru & RT	1	08
Phasing EB Only	WB Onl G = 15.0		G =	03	G =)4	G = 1		G = 5.0		G = 37.0	G =	
	$\frac{G - 15.0}{Y = 4.5}$		Y =		Y =		Y = 4.	5	Y = 0		Y = 4.5	Y =	
Duration of Analysis (hrs) = 0).25								Cycle Le	ngth (C = 99.0		
Lane Group Capacity,	Contro) De	lay	, and l	OS D	etermi	nation					SB	
		E	В			WB			NB			1098	
Adjusted Flow Rate	82	97	•	11	177	188	702	27	1486		312		
Lane Group Capacity	107	11.	3	536	268	282	600	492	1481		322	1307	
v/c-Ratio	0.77	0.8	6	0.02	0.66	0.67	1.17	0.05	1.00		0.97	0.84	
Green Ratio	0.06	0.0	6	0.34	0.15	0.15	0.38	0.28	0.42		0.18	0.37	
Uniform Delay d ₁	45.8	46.	.1	21.8	39.6	39.6	30.8	26.2	28.5		40.2	28.3	
	0.32	0.3		0.11	0.24	0.24	0.50	0.11	0.50		0.48	0.38	
Delay Factor k Incremental Delay d ₂	27.7		1.4	0.0	5.9	5.9	93.4	0.0	24.2		41.7	5.1	
	1.000	_	000	1.000	1.000	1.000	1.000	1.000	1.000		1.000	1.000	1
PF Factor	73.6	_	0.4	21.8	45.5	45.5	124.2	26.3	52.7		81.9	33.4	
Control Delay				C	D	D	F	С	D		F	С	
Lane Group LOS	- -			+	97.3		1	52.2			44.1		
Approach Delay		79.2			+	- F			D		D		
Approach LOS		E			-		Intere	ection I				E	
Intersection Delay		62.2				Intersection LOS HCS+TM Version 5.2					Generate	d: 2/16/20	06 10:0

Copyright © 2005 University of Florida, All Rights Reserved

APPENDIX E

➤2030 + Project Worksheets

And the second of the second s The second secon Politika kalendar Sakkara dio Salong araba arabah as

Table E1 2030 + Project Freeway Segment Volumes and Level of Service Summary

Route	Limits	# Lanes	Capacity	ADT	Peak Hour %	Direction Split	Truck Factor	v/c Ratio	LOS
SR94	Sweetwater Springs to Avocado	2	4,400	88,090	8.60%	55.0%	5.0%	0.994	Е
SK94	Avocado to Jamacha (SR54)	2	4,400	67,009	8.60%	55.0%	5.0%	0.756	С

Lanes - Number of lanes in one direction: HOV-High Occupancy Lanes

Capacity - Capacity in one direction

ADT - Average Daily Traffic

Peak Hour % - Percentage of average daily traffic occurring during the peak hour

Direction Split - Percentage of peak hour traffic traveling in peak direction.

Truck Factor - Truck/terrain factor to represent influence of heavy vehicles and/or grades.

Peak Hour Volume - Peak hour traffic in peak direction of travel/ For facilities with HOV lanes, ten percent is assumed to use HOV lanes.

v/c Ratio - Volume to Capacity Ratio

LOS - Caltrans District 11 procedure was used to estimate the freeway level of service. Designations vary from A to F, with four level of LOS F from F(0) to F(3).

SHORT REPORT Site Information General Information R Peaslee/V Haskell/J Bavos Fuerte Dr/Avocado Blvd Intersection Analyst All other areas Area Type County of San Diego Darnell & Associates Jurisdiction Agency or Co. 2030 w/ Project 02/09/2006 Analysis Year Date Performed AM Peak Hour Time Period Volume and Timing Input SB NB WB EB RT TH LT TH RT LT RT TH RT LT TH LT 0 2 1 2 1 1 1 1 1 1 Number of Lanes 1 TR L TR L R T L R T L Lane Group 260 810 111 68 935 430 57 362 170 130 172 140 Volume (vph) 2 2 2 2 2 2 2 2 2 2 2 2 % Heavy Vehicles 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 PHF Α Α Α Α Α Α Α Α Α Α Α Α Pretimed/Actuated (P/A) 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 Startup Lost Time 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 2.0 Extension of Effective Green 2.0 3 3 3 3 3 3 3 3 3 3 Arrival Type 3.0 30 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 Unit Extension 0 0 0 0 0 0 0 0 0 0 0 Ped/Bike/RTOR Volume 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 Lane Width 0 Ν N Ν 0 Ν Ν Ν 0 Ν 0 Ν Parking/Grade/Parking Parking/Hour 0 0 0 0 0 0 0 0 0 Bus Stops/Hour 3.2 3.2 3.2 3.2 Minimum Pedestrian Time 80 Thru & RT **NB** Only Excl. Left 04 WB Only 03 EB Only G = G = 47.0Phasing G = 5.0G = 21.9G = G = 18.0G = G = 10.0Y = Y = 4.5Y = 0Y = 4.5Y = Timing Y = Y = 4.5Y = 4.5Cycle Length C = 119.9 Duration of Analysis (hrs) = 0.25 Lane Group Capacity, Control Delay, and LOS Determination SB NB WB EB 1163 1090 121 467 62 185 393 152 187 141 Adjusted Flow Rate 1339 1523 323 464 586 280 547 266 155 148 Lane Group Capacity 0.87 0.37 1.01 0.720.11 1.40 0.70 1.21 0.28 0.95 v/c Ratio 0.18 0.39 0.43 0.26 0.370.15 0.08 0.35 0.15 0.08 Green Ratio 33.6 27.9 43.0 44.3 51.0 24.7 48.3 28.4 55.0 54.7 Uniform Delay d1 0.40 0.11 0.50 0.28 0.11 0.50 0.26 0.11 0.50 0.46 Delay Factor k 6.4 0.7 1.6 43.4 0.1 201.7 7.7 138.4 0.3 59.7 Incremental Delay do 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 1.000 PF Factor 43.7 40.0 87.6 29.5 56.0 252.7 24.8 28.7 193.4 114.4 Control Delay D D C F

Copyright © 2005 University of Florida, All Rights Reserved

HCS+TM Version 5.2

Intersection LOS

C

47.0

D

Generated: 2/16/2006

40.3

D

Ε



F

173.8

F

Ε

F

118.0

F

73.9

F

C

Lane Group LOS

Approach Delay

Approach LOS

Intersection Delay

SHORT REPORT **General Information** Site Information R Peaslee/V Haskell/J Bavos Alalyst Intersection Fuerte Dr/Avocado Blvd Area Type Agency or Co. All other areas Darnell & Associates Jurisdiction Analysis Year County of San Diego 2030 w/ Project Date Performed 02/09/2006 ne Period PM Peak Hour

Velume and Timing Input												72
		EB			WB			NB			SB	A.
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes	1	1	1	1	1	1	1	2	0	1	2	0
Lane Group	L	ı T	R	L	T	R	L	TR	Ì	L	TR	
∨ ume (vph)	75	89	10	163	173	646	25	1225	142	287	915	95
% Heavy Vehicles	2	2	2	2	2	2	2	2	2	2	2	2
P	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92		0.92	0.92
Pretimed/Actuated (P/A)	A	Α	Α	Α	Α	Α	Α	A	A	A	A	Α
Startup Lost Time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	†
E ension of Effective Green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	<u> </u>	2.0	2.0	
Arrival Type	3	3	3	3	3	3	3	3		3	- 3	†
J t Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
-ane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	
Parking/Grade/Parking	·N	0	Ν	Ν	0	N	N	0	N	N	0	N
² arking/Hour								+	- · ·		-	1. //
3 ■ Stops/Hour	0	0	0	0	0	0	0	0		10	0 1	
/ Imum Pedestrian Time		3.2			3.2			3.2		 	3.2	
hasing EB Only	WB Only		03	0.	<u> </u>	Excl. Le	oft	NB Only	<u> </u>	hru & RT		
G = 6.0	6 = 15.0	G =		G=	·	G = 18.		G = 5.0		i = 37.0	G =	<u> </u>
	' = 4.5	Y =		Y =		Y = 4.5		1 = 0		= 4.5	Y =	
ouration of Analysis (hrs) = 0.2	25			·				Cycle Len			<u> </u>	

e Group Capacit	y, Contro	l Dela	, and	LOS D	etermi	nation		oyolc Ler	<u> </u>			
		EB			WB			NB			SB	
disted Flow Rate	82	97	11	177	188	702	27	1486	·	312	1098	
ane Group Capacity	107	113	536	268	282	600	492	1481	·	322	1307	
Ratio	0.77	0.86	0.02	0.66	0.67	1.17	0.05	1.00		0.97	0.84	
reen Ratio	0.06	0.06	0.34	0.15	0.15	0.38	0.28	0.42		0.18	0.37	<u> </u>
niform Delay d ₁	45.8	46.1	21.8	39.6	39.6	30.8	26.2	28.5		40.2	28.3	
€ y Factor k	0.32	0.39	0.11	0.24	0.24	0.50	0.11	0.50		0.48	0.38	
cremental Delay d ₂	27.7	44.4	0.0	5.9	5.9	93.4	0.0	24.2		41.7	5.1	
Factor	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000		1.000	1.000	
ontrol Delay	73.6	90.4	21.8	45.5	45.5	124.2	26.3	52.7		81.9	33.4	
Group LOS	E	F	С	D.	D	F	С	D		F	С	
proach Delay		79.2			97.3			52.2			44.1	
oproach LOS		Ε			F			D			D	
section Delay		62.2				Intersec	tion LOS				E	
vright @ 2005 University of Floris	I= All D:-1-1- D									<u> </u>		

pyright © 2005 University of Florida, All Rights Reserved

HCS+TM Version 5.2

Generated: 2/16/2006 11:12 AM



	1 44 C	-WAY STOP (
eneral Information				rmation		Chase Ave/	Chasaln	
nalyst	V Haskell/J		Intersection			County of S		
gency/Co.		sociates, Inc.	Jurisdiction			2030 w/ Pro		
ate Performed	02/09/2006		Analysis `	real		2000 117 7 70	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
nalysis Time Period	AM Peak							
roject Description 030204	4-Fuerte Ranch		North/Co.	uth Street:	Chasela	ane		
ast/West Street: Chase Av	venue				0.25	1770		
tersection Orientation: Ea			Study Fel	1100 (1113).	0.20			
ehicle Volumes and A	Adjustments					Westboun	d ·	
lajor Street		Eastbound	3		4	T 5		6
lovement	1	2 T	R			T		R
	L	390	75		20	735		5
olume (veh/h)	5 0.92	0.92	0.92		0.92	0.92	0.	92
Peak-Hour Factor, PHF Hourly Flow Rate, HFR	5	423	81.		21	798		5
veh/h) Percent Heavy Vehicles	2		-		2			
Median Type				Undivided				
RT Channelized			0					0
	0	1	0		1	1		0
anes Configuration	LTR				L			TR
Jpstream Signal		0				0		
Minor Street		Northbound				Southbou	nd	
Movement	7	8	9		10	11		12
MOVEMENT	L	Т	R		L	Т		R
Volume (veh/h)	81	5	10		5	5		5
Peak-Hour Factor, PHF	0.92	0.92	0.92		0.92	0.92).92
Hourly Flow Rate, HFR (veh/h)	88	5	10		5	5		5
Percent Heavy Vehicles	2	2	2		2	2	<u> </u>	
Percent Grade (%)		0				0		
Flared Approach		Y				N		
Storage		1				0		
RT Channelized			0					0
Lanes	0	1	0		0	1		0
Configuration		LTR				LTR		
Delay, Queue Length, and	Level of Serv	ice					o (11	
Approach	Eastbound	Westbound		Northbound	d		Southbound	
Movement	1	4	.7	8	9	10	11	12
Lane Configuration	LTR	L		LTR			LTR	
v (veh/h)	5	21		103			15	
	821	1061		138			171	
C (m) (veh/h)	0.01	0.02	0.75		0.09			
v/c		0.06	4.40			0.28		
95% queue length	0.02	8.5		83.6	+		28.1	
Control Delay (s/veh)	9.4		-	F	1		D	
LOS	Α	Α		83.6			28.1	
Approach Delay (s/veh)			<u> </u>			_	D	
Approach LOS				HCS+TM Vers	F D Generated: 2/16/			000 10

Copyright © 2005 University of Florida, All Rights Reserved

HCS+TM Version 5.2

General Information	<u> </u>		Site I	nforma	tion					
nalyst	V Haskel		Interse	ection		Chase A	/e/Chase Lr	7		
gency/Co.		Associates, Inc.	Jurisdi	ction			f San Diego			
Date Performed	02/09/20		Analys	is Year		2030 w/ F	Project			
alysis Time Period	PM Peak									
bject Description 030		ch					Ţ.			
ast/West Street: Chase					eet: Chase	Lane				
ersection Orientation:			Study I	Period (h	rs): 0.25			?		
Chicle Volumes an	d Adjustmen	ts								
lajor Street		Eastbound				Westbou	ınd			
vement	1	2	3		4	5		6		
	L	Т	R		L	Т		R		
/olume (veh/h)	5	970	56		5	515		5		
ak-Hour Factor, PHF	0.92	0.92	0.92	<u>'</u>	0.92	0.92		0.92		
urly Flow Rate, HFR veh/h)	5	1054	60		5	559		5		
rcent Heavy Vehicles	2				2					
dian Type				Undivi	ded					
RT Channelized			0	T				0		
nes	0	1	0		1	1		0		
nfiguration	LTR				L			TR		
lpstream Signal		0				0				
or Street		Northbound				Southbou	Southbound			
vement	7	8	9		10	11		; 12		
	L	Т	R		L	T		R		
ume (veh/h)	35	5	5		5	5	*	5		
k-Hour Factor, PHF	0.92	0.92	0.92		0.92	0.92		0.92		
lourly Flow Rate, HFR a h/h)	38	5	5		5	5		5		
cent Heavy Vehicles	2	2	2		2	2		2		
ercent Grade (%)	-	0	_1			0				
red Approach		T Ÿ				· · · · · · · · · · · · · · · · · · ·				
torage		1		<u> </u>		N N				
T Channelized			 			0				
es	0	+	0					0		
Configuration	J	1 1 1 7 7 7	0		0	1		0		
	1	LTR				LTR				
elay, Queue Length, an			T							
lovement	Eastbound 1	Westbound		Northbou	· · · · · · · · · · · · · · · · · · ·		Southbound	· · · · · · · · · · · · · · · · · · ·		
ane Configuration	LTR ·	4	7	8	9	10	11	12		
eh/h)	5	<u>L</u> 5		LTR 48			LTR	 		
(m) (veh/h)	1008	627		80			15	<u> </u>		
(III) (VCIVII)	0.00	0.01				-	110			
queue length	0.00			0.60			0.14			
		0.02		2.69			0.46			
ontrol Delay (s/veh)	8.6	10.8		102.3			42.8			
	A	В		F			Ε			
p p roach Delay (s/veh)				102.3			42.8			
oproach LOS				F			E			

TWO-WAY STOP CONTROL SUMMARY



. wo-way stop control TWO-WAY STOP CONTROL SUMMARY Site Information **General Information** Chase Ave/Fuerte Dr Intersection V Haskell/J Bavos County of San Diego Analyst Jurisdiction Darnell & Associates, Inc. 2030 w/ Project Agency/Co. Analysis Year 02/09/2006 Date Performed AM Peak Analysis Time Period 030204-Fuerte Ranch Project Description Fuerte Drive North/South Street: East/West Street: Chase Avenue Study Period (hrs): 0.25 East-West Intersection Orientation: Vehicle Volumes and Adjustments Westbound Eastbound 6 Major Street 5 4 3 2 R T Movement R T L 800 358 5 375 0.92 Volume (veh/h) 0.92 0.92 0.92 0.92 0.92 Peak-Hour Factor, PHF 0 869 389 5 Hourly Flow Rate, HFR 407 0 veh/h) 0 0 Percent Heavy Vehicles Undivided 0 Median Type 0 0 RT Channelized 1 1 0 1 0 anes L TR 0 Configuration 0 Upstream Signal Southbound Northbound 12 Minor Street 11 10 9 7 8 R Movement T R T 1 238 5 0.92 Volume (veh/h) 0.92 0.92 0.92 0.92 0.92 Peak-Hour Factor, PHF 0 0 0 258 Hourly Flow Rate, HFR 0 5 0 0 (veh/h) 0 0 0 0 Percent Heavy Vehicles 0 0 Percent Grade (%) N Ν Flared Approach 0 0 0 Storage 0 0 RT Channelized 0 0 0 0 0 Lanes LR Configuration Delay, Queue Length, and Level of Service Southbound Northbound -Westbound -Eastbound Approach 11 10 9 8 7 1 Movement LR L _ane Configuration 263 389 v (veh/h) 504 1158 C (m) (veh/h) 0.52 0.34 v/c

1.49

9.7

Α

Copyright © 2005 University of Florida, All Rights Reserved

HCS+TM Version 5.2

2.98

19.7

C

19.7

C

Generated: 2/16/2006 10:07

os

95% queue length

Approach LOS

Control Delay (s/veh)

Approach Delay (s/veh)

	T	WO-WAY STO	P CONTR	OL SUM	MARY			
General Information	1		Site I	nformati	on			
nalyst	V Haske	II/J Bavos	Inters	ection		Chase A	ve/Fuerte	Dr
.gency/Co.		& Associates, Inc.	Jurisd	iction			f San Die	
Date Performed	02/09/20		Analy	sis Year		2030 w/		×
alysis Time Period	PM Peal							
Pubject Description 03	0204-Fuerte Rai	nch				-:		4
East/West Street: Chas					et: Fuerte D	Prive		1851.
ersection Orientation:			Study	Period (hrs): 0.25			44 - 15
Vehicle Volumes ar	<u>ıd Adjustmer</u>	nts						
Major Street		Eastbound				Westboo	und	· .
vement	1	2	· 3		4	5		6
(olumo (vob (h)	LL	T	R		L	T		R
Volume (veh/h) Reak-Hour Factor, PHF	0.92	970	5		186	565		
Harry Flow Rate, HFR		0.92	0.92	2	0.92	0.92		0.92
(veh/h)	0	1054	5		202	614		· • 0
Percent Heavy Vehicles	0		-		0			
Madian Type				Undivide	d			
RT Channelized			0					0
nes	0	1	0		1	1		0
nfiguration		·	TR		L	1 7		
Jpstream Signal		0				0		
vor Street		Northbound				Southbo	und	
vement	7	8	9		10	11	T T	12
	L	Т	R		L	T		R
/ ume (veh/h)	10		239			1		
k-Hour Factor, PHF	0.92	0.92	0.92		0.92	0.92		0.92
Hourly Flow Rate, HFR	10	0	259		0	0		0
cent Heavy Vehicles	0	0	0		0	0		0
Percent Grade (%)		0				0		
ed Approach	·	N	T			T N		
torage		0				0		
RT Channelized			0					
es es	0	0	0		0	0		0
figuration		LR	 		<u> </u>	"		0
D <u>el</u> ay, Queue Length, ar	nd I evel of Sen							
roach	Eastbound	Westbound		Northbound		T	Southbour	
/lovement	1	4	7	8	9	10	11	
ane Configuration	-	L	 	LR	-	10	11	12
eh/h)		202		269		 		
(m) (veh/h)		665		229	1			
/		0.30		1.17				
queue length		1.28		12.85			·	
control Delay (s/veh)		12.8		159.3			 	
		B		159.3 F	 		<u> </u>	
pproach Delay (s/veh)		<u> </u>					L	
poroach LOS				159.3				
				<u> </u>				

ight © 2005 University of Florida, All Rights Reserved

Generated: 2/16/2006 10:06 AM

•		-WAY STOP C									
eneral Information			Site Info			T _C	uerte Farms	/Damon			
nalyst	R Peaslee/J	Bavos	Intersection				County of Sa.				
gency/Co.	Darnell & Ass	sociates, Inc.	Jurisdictio				030 w/ Proje				
ate Performed	02/09/2006		Analysis Y	eai							
nalysis Time Period	AM Peak										
roject Description 03020	4-Fuerte Ranch		North/Sou	th Stroot	· Dam	on I n		······································			
ast/West Street: Fuerte Fa	arms Rd		Study Per	ind (hrs):	0.25						
tersection Orientation: No			Study I CI	100 (1110).							
ehicle Volumes and	Adjustments						Southbound				
lajor Street		Northbound	3		1	4 5			6		
lovement	1	2	R		一		Т		R		
	L	T	2	_	2		10		60		
/olume (veh/h)	15	10 0.92	0.92		0.92		0.92	C).92		
Peak-Hour Factor, PHF	0.92						1		4		
lourly Flow Rate, HFR	16	1	5		1		1				
veh/h)	2				0						
Percent Heavy Vehicles				Undivide	d						
Median Type		T	. 0						0		
RT Channelized	0	1	0		0		1		1		0
anes	LTR				LTR						
Configuration	LIN	0					0				
Jpstream Signal		Eastbound					Westbound	1			
Minor Street	7	8	9		10		11		12		
Movement	1	T	R		L		T		R		
	15	1	5		1		1		4		
Volume (veh/h)	15 0.92	0.92	0.92		0.92		0.92		0.92		
Peak-Hour Factor, PHF			-		16		10		2		
Hourly Flow Rate, HFR	2	10	65						0		
(veh/h) Percent Heavy Vehicles	2	0	0		0		0				
		0					0				
Percent Grade (%)		N					N				
Flared Approach		0					0				
Storage		<u> </u>	0						0		
RT Channelized		1	0		0		1		0		
Lanes	0	LTR					LTR				
Configuration											
Delay, Queue Length, an	d Level of Serv	ice		Westbou	nd			astbound			
Appreach	Northbound	Southbound		vvestboo	110	9	10	11	12		
Movement	1	4	7		+			LTR	1		
Lane Configuration	LTR	LTR		LTR				22	+		
v (veh/h)	16	2		6			 	906			
C (m) (veh/h)	1524	1620		974					-		
	0.01	0.00		0.01				0.02			
v/c	0.03	0.00		0.02				0.07			
95% queue length	7.4	7.2		8.7				9.1			
Control Delay (s/veh)		A A		A				Α			
LOS	A	<u> </u>	-	8.7				9.1			
Approach Delay (s/veh)				- O. 7			A				

Approach LOS -Copyright © 2005 University of Florida, All Rights Reserved

HCS+TM Version 5.2

Generated: 2/16/2006 10:05 F



.	T	WO-WAY STO	P CONTR	OL SUMI	MARY			
General Information	n		Site I	nformati	on .		·	
/ alyst	J Bavos		Interse	ection		Fuerte Fa	arms/Damo	on.
A. ency/Co.	Darnell 8	Associates, Inc.	Jurisd	iction			f San Dieg	
Date Performed	02/09/20	06	Analys	sis Year		2030 w/ I		
alysis Time Period	Midday F	Peak						
	0204-Fuerte Ran	nch						
East/West Street: Fuert			North/S	South Stree	t: Damon	Ln		
Ir ersection Orientation:			Study	Period (hrs): 0.25			
Whicle Volumes ar	<u>nd Adjustmen</u>							
Major Street		Northbound				Southbo	und	
Vement	1	2	3		4	5		6
Volume (veh/h)	<u> </u>	T	R		L	Т		R
Plak-Hour Factor, PHF	5 0.92	10	1		6	10		65
Hurly Flow Rate, HFR		0.92	0.92	<u>'</u>	0.92	0.92		0.92
(veh/h)	16	2	10		2	1		3
Percent Heavy Vehicles	2				0			
M dian Type				Undivide	d			
RT Channelized			0		***************************************	T	·	0
Les	0	1	-0		0	1		0
○ Infiguration	LTR				LTR	†		
Upstream Signal		. 0				0		
Maor Street		Eastbound				Westbou	ınd	/
V vement	7	8	9		10	11	1	12
	L	Т	R		L	Т		R
√ ume (veh/h)	15	2	10		2	1		3
k-Hour Factor, PHF	0.92	0.92	0.92		0.92	0.92		0.92
Hourly Flow Rate, HFR veh/h)	6	10	70		5	10		1.
cent Heavy Vehicles	2	0	0		0	0		0
Percent Grade (%)		0				0		
Fleed Approach		N				T N		
torage		0				0		
RT Channelized			0			 		
_a es	0	1	0		0	1		0
figuration		LTR	-			LTR		0
elay, Queue Length, a	nd Level of Serv					LIK		
\; roach	Northbound	Southbound		Westbound	1	T	Faathawa	<u> </u>
Novement	1	4	7	8	9	10.	Eastbound	
ane Configuration	LTR	LTR	'	LTR	+	10.	11 LTR	12
r eh/h)	5	6		6			28	
(m) (veh/h)	1518	1621		951	 		936	+
·/•	0.00	0.00		0.01		 	0.03	
queue length	0.01	0.01		0.02	1		0.03	+
Control Delay (s/veh)	7.4	7.2		8.8		 	9.0	+
.4	Α	A		A A	1.		9.0 A	-
pproach Delay (s/veh)				8.8	1		9.0	
pproach LOS				0.0			J.U	

opproach LOS -oppright © 2005 University of Florida, All Rights Reserved

Generated: 2/16/2006 10:05 AM

maral Information			Site Infor	mation			omor			
eneral Information	J Bavos		Intersection	1		-uerte Farms/D				
alyst	Darnell & Asso	ociates, Inc.	Jurisdiction			County of San D 2030 w/ Project				
gency/Co. ate Performed	02/09/2006		Analysis Y	ear		2030 W/ FIDJECT				
nalysis Time Period	PM Peak Hou	r								
piect Description 030204	Fuerte Ranch			- Ctroot: D	mon I n					
st/West Street: Fuerte Far	ms Rd		North/Sout	n Street: Da	5					
ersection Orientation: No.	rth-South		Study Pend	od (hrs): 0.2	.0					
ehicle Volumes and A	diustments					Southbound				
ajor Street	and the second s	Northbound		4	— T	5	6			
ovement	1	2	3 R			Т	R			
	L	T	1	6		10	. 10			
olume (veh/h)	5	10 0.92	0.92	0.9		0.92	0.92			
eak-Hour Factor, PHF	0.92					1	3			
ourly Flow Rate, HFR	10	2	0			-				
reh/h) ercent Heavy Vehicles	2			0						
ercent Heavy Verlicles ledian Type			(Individed		0				
T Channelized			0			1	0			
	0	1	0	(+			
anes Configuration	LTR			L7	R	0	1			
Jpstream Signal		0				Westbound				
Minor Street		Eastbound			10	11	12			
Movement	7	8	9		10 L	Т	R			
AIOACHIOH	L	Т	R		2	1	3			
/olume (veh/h)	10	2	0		92	0.92	0.92			
Peak-Hour Factor, PHF	0.92	0.92	0.92			10	1			
Hourly Flow Rate, HFR (veh/h)	6	10	10		5 0	0	0			
Percent Heavy Vehicles	2	0	1 0		<u> </u>	0				
Percent Grade (%)		0	T			N				
Flared Approach		N				0				
Storage		0					0			
RT Channelized			0		0	+ 1	0			
Lanes	0	1	0		0	LTR				
Configuration		LTR								
Delay, Queue Length, and	d Level of Servi	ce		A (4)		Fa	stbound			
Approach	Northbound -	Southbound		Westbound	9		11			
Movement	. 1	4	7	8		+	LTR			
Lane Configuration	LTR	LTR		LTR		-	12			
v (veh/h)	5	6		6			924			
C (m) (veh/h)	1596	1621		986		+	0.01			
	0.00	0.00		0.01			0.04			
v/c	0.01	0.01		0.02						
95% queue length	7.3	7.2		8.7			8.9			
Control Delay (s/veh)	7.5 A	Α		Α			A			
LOS				8.7			8.9			
Approach Delay (s/veh)				Α			A .			
Approach LOS Copyright © 2005 University of Flo		<u> </u>		HCS+ TM Version	n 5 2	Genera	ated: 2/16/2006			



General Information					MMARY			
			Site	Informa	ation			
alyst	R Peasle	e/J Bavos		section		Fuerte Di	rive/Fuerte	Farms
Agency/Co.	Darnell &	Associates, Inc.		diction			Fuerte Drive/Fuerte Farms County of San Diego 2030 w/ Project	
Date Performed	02/09/200		Anal	sis Year				<u> </u>
alysis Time Period	AM Peak							
Poject Description 030	204-Fuerte Ran	ch						热 .
East/West Street: Fuerte			North	/South St	treet: Fuerte	Farms		
Ir ersection Orientation:			Study	Period (hrs): 0.25		·	
Vehicle Volumes and	d Adjustmen	ts						
Major Street		Eastbound				Westbou	ınd	
vement	1	2		3	4			6
	L	T		?	L	Т		
Volume (veh/h)		335	20		5	448		
ak-Hour Factor, PHF	0.92	0.92	0.9	2	0.92	0.92		0.92
urly Flow Rate, HFR (veh/h)	0	364	28	3	5	486		0
cent Heavy Vehicles	0				2			-~
V dian Type				Undiv	rided			
RT Channelized			()				0 .
es	0	1	0		0	1		0
Omfiguration			TF	7	LT	·		
Jpstream Signal		0			-	0		
or Street		Northbound				Southbou	ınd	
/ vement	7	8	Ç		10	11		12
	L .	Т	F.	2	L	T		R
// ume (veh/h)	111		10)				
k-Hour Factor, PHF	0.92	0.92	0.9	2	0.92	0.92		0.92
lourly Flow Rate, HFR	120	0 .	10		0	0		0
ecent Heavy Vehicles	2	0	2		0	0		0
ercent Grade (%)		0			1.	0	······································	
ed Approach		N				N		
torage		0	,					
₹T Channelized			0					0
aes	0	0	0		0	0		0
figuration		LR				<u> </u>	-	0
elay, Queue Length, and	d Level of Servi	ce						
roach	Eastbound	Westbound		Northbo	und	T	Southbound	4
lovement	1	4	7	8	9	10	11	
ane Configuration		LT		LR	9	10	11	12
eh/h)		5						
(m) (veh/h)				130				
(III) (VCIIII)		1167		332				
guava la satta		0.00		0.39				
queue length		0.01		1.80				
ontrol Delay (s/veh)		8.1		22.7				
		Α		С				
pproach Delay (s/veh)				22.7				
pproach LOS				С				
ght © 2005 University of Florid	la, All Rights Reserve	d		-CS+TM V	ersion 5.2	Gene	rated: 2/16/2	006 10:04 AM

	T	WO-WAY STO	P CONTR	OL SU	MMARY				
General Informatio	n .		Site I	nforma	tion				
Analyst		e/J Bavos	Inters	ection		Fuerte D	rive/Fu	erte F	arms
Agency/Co.		Associates, Inc.	Jurisd	iction		County o			
Date Performed	02/09/20		Analys	sis Year		2030 W/I			
Analysis Time Period	PM Peak								
Project Description 03		nch							
East/West Street: Fuert					eet: <i>Fuerte l</i>	arms			
Intersection Orientation:			Study	Period (h	rs): 0.25				
Vehicle Volumes ar	nd Adjustmen	its							
Major Street		Eastbound			-	Westbou	und		
Movement	1	2	3		4	5			6
Malaura (a.a.b. (b.)	L	Т	R		L	T			R
Volume (veh/h)		231	57		10	177			
Peak-Hour Factor, PHF Hourly Flow Rate, HFR	0.92	0.92	0.92	?	0.92	0.92		().92
nouny riow Rate, HFR (veh/h)	0	251	61		10	192	Ī		0
Percent Heavy Vehicles	0	- 			2			· · · · · · · · · · · · · · · · · · ·	
Median Type	<u> </u>			Undivid					
RT Channelized			0	I	160	<u> </u>	 1		
Lanes	0	1							0
Configuration	- 		0 TR		0	1			0
Jpstream Signal		0	IR		LT	+			
Minor Street							0		
Movement	7	Northbound 8	9		- 10	Southbou	und		*****
THE VOILE		T	R		10	11			12
Volume (veh/h)	31				L	Т			R
Peak-Hour Factor, PHF	0.92	0.92	0.92		0.92				
Hourly Flow Rate, HFR					0.92	0.92			.92
veh/h)	33	0	10		0	0	ĺ		0
Percent Heavy Vehicles	2	0	2		0	0			0
Percent Grade (%)		0	· · · · · · · · · · · · · · · · · · ·			0	1		
Flared Approach		N				T N			
Storage		0				1 0	-+		
RT Channelized			0			-			
anes	0	0	1 0		0				0
Configuration		LR	+			0			0
Delay, Queue Length, a	nd Level of Son								
Approach	Eastbound	Westbound		North I-					
Movement	1			Northbou			Southb		
ane Configuration	1	4	7	8	9	10	1	1	12
		LT		LR					
(veh/h)		10		43					
(m) (veh/h)		1248		571					
/c		0.01		0.08					
5% queue length		0.02		0.24				- 	
Control Delay (s/veh)		7.9		11.8				_	
OS		Α		В					
pproach Delay (s/veh)				11.8			<u> </u>		
pproach LOS									
Dayright © 2005 University of Flor			L	В		<u> </u>			

opyright © 2005 University of Florida, All Rights Reserved

HCS+TM Version 5.2

Generated: 2/16/2006 10:04 AM

		T	WO-WAY STOR	CONTE	ROL SI	JMN	MARY			
General Information	1			Site	Inform	atic	on			
alyst		R Peasle	e/V Haskell/J Bavo	s Inters	ection			Fuerte/Ci	hase Ln	
ency/Co.		Darnell &	Associates Inc.	Juriso	diction				f San Diego) .
Date Performed		02/09/20		Analy	sis Year	-		2030 W/F		
alysis Time Period		AM Peak								*:
Dject Description 03		uerte Fa	rms							
East/West Street: Fuert				North	South S	treet	: Chase La	ane		
rersection Orientation:	East-V	Vest			Period (The second
vehicle Volumes ar	d Adi	ustmen	ıts							
Major Street			Eastbound		· · · · ·	Г		Westbou	ınd	1
vement		1	2	T 3			4	5	ina	6
U		L	Т	F			L	T		R
/olume (veh/h)		66	258	5			5	338		15
ak-Hour Factor, PHF		0.92	0.92	0.9			0.92	0.92		0.92
urly Flow Rate, HFR veh/h)		71	280	5			5	367		16
ent Heavy Vehicles		2					2			
dian Type					Undi	vider		<u> </u>		
RT Channelized						7,000	•			0
es		0	1	0			0	1	· ·	0
nfiguration		LTR		1			LTR	1		· U
Jpstream Signal			. 0	 			LIK	0		
or Street	=		Northbound							
/ement		7 .	Northbourid 8	9		-	40	Southbou	und ,	
			T				10	11		M2
/ ume (veh/h)		10	5	R			L	T		R
k-Hour Factor, PHF		0.92	0.92	5			10	5		90
lourly Flow Rate, HFR			0.92	0.9.	2		0.92	0.92		0.92
vin/h)		10	5	5			10	5		97
cent Heavy Vehicles		2	2	2			2	2		2
Percent Grade (%)			0					0		
led Approach			N					N		
torage			0					0		
RT Channelized				0				<u> </u>		0
.a es		0	1	0			0	. 1		0
cares Configuration			LTR	1				LTR		
elay, Queue Length, ar	nd Leve	of Serv						L		
roach		ocund	Westbound		Northbo	Jund		1	Southbound	
Novement		1	4	7		Juliu		 		
ane Configuration		' R		/	8		9	10	11	12
			LTR		LTR				LTR	<u> </u>
eh/h)		1	5		20				112	
(m) (veh/h)	11		1277		287				564	
	0.0	26	0.00		0.07				0.20	
5 queue length	0.1	19.	0.01		0.22	?	-		0.73	1
ontrol Delay (s/veh)	8.	3	7.8		18.5				13.0	
			A		70.5 C					
pproach Delay (s/veh)									В	<u> </u>
			, 		18.5				13.0	
poroach LOS	-	-	-		С				В	

ght © 2005 University of Florida, All Rights Reserved

Generated: 2/16/2006 10:04 AM



		WO-WAY STOP	CONTRO	OL SUM	MARY			
General Information	n .		Site Ir	nformati	on		······································	
Analyst		e/V Haskell/J Bavos	Interse	ction		Fuerte/C	hase Ln	
Agency/Co.		Associates Inc.	Jurisdi	ction			f San Diego)
Date Performed	02/09/20		Analys	is Year		2030 w/		
Analysis Time Period	PM Peak							
Project Description 03	0204 - Fuerte Fa	rms						
East/West Street: Fuert					t: Chase	Lane		
Intersection Orientation:			Study F	Period (hrs)	: 0.25			
Vehicle Volumes ar	<u>ıd Adjustmen</u>				*.			
Major Street	·	Eastbound				Westboo	und	
Movement		2	3		4	5		- 6
Volume (veh/h)	30	T	R		L	Т		R
Peak-Hour Factor, PHF	0.92	249	5		10	171		10
Hourly Flow Rate, HFR		0.92	0.92		0.92	0.92		0.92
(veh/h) Percent Heavy Vehicles	32	270	5		10	185		10
	2				2			
Median Type RT Channelized				Undivide	d			
			0					0
Lanes	0	1 .	0		0	1		0
Configuration Upstream Signal	LTR				LTR			
		0				0		
Minor Street Movement		Northbound				Southboo	und	
viovement	7	8	9		10	11		12
/olume (veh/h)	L	T	R		L	T		R
Peak-Hour Factor, PHF	0.92	10	5		50	5		16
Hourly Flow Rate, HFR		0.92	0.92		0.92	0.92		0.92
veh/h)	10	10	5		54	5		17
Percent Heavy Vehicles	2	2	2		2	2		2
Percent Grade (%)		0				0		
Flared Approach		N				N		
Storage		0				0		
RT Channelized			. 0			1		0
anes	0	1	0		0	1		0
Configuration		LTR				LTR		
Delay, Queue Length, an	d Level of Serv	ice						
Approach	Eastbound	Westbound	١	orthbound		5	Southbound	
Movement	1	4	7	8	9	10	11	12
ane Configuration	LTR	LTR		LTR	 	1	LTR	1-12
(veh/h)	32	10		25			76	
(m) (veh/h)	1378	1288		463			474	
/c	0.02	0.01		0.05				
5% queue length	0.07	0.02				-	0.16	
Control Delay (s/veh)	7.7	7.8		0.17			0.57	<u> </u>
OS (Siveri)	<u>-</u>			13.2			14.0	
	Α	A		В			В	
pproach Delay (s/veh)				13.2			14.0	
pproach LOS				В			В	

	ΤV	VO-WAY STOP	CONTRO	OL SUMN	IARY			
General Information			Site Ir	nformatio	n			
alyst	R Peaslee	e/V Haskell/J Bavos				Damon/Fu	<i>jerte</i>	
Agency/Co.		Associates Inc	Jurisdi				San Diego	
Date Performed	02/09/200	06	Analys	is Year	.:	2030 w/ P		
alysis Time Period	AM Peak							. •
Froject Description 030		ms	1					Å.
East/West Street: Fuerte			North/S	South Street	: Damon L	.ane		
le ersection Orientation:	East-West		Study F	Period (hrs):	0.25			
Vehicle Volumes an	d Adjustment	ts						
Major Street		Eastbound				Westbou	nd	-
Nement	1	2	3		4	5		6
-	L L	Т	R		L	Т		R
Volume (veh/h)	90	229	36		16	445		25
F ak-Hour Factor, PHF	0.92	0.92	0.92	<u> </u>	0.92	0.92		0.92
Hourly Flow Rate, HFR (veh/h)	97	248	39		17	483		27
Percent Heavy Vehicles	2				2			
Madian Type				Undivided	1			
RT Channelized			0					0
Lines	0	1	. 0		0	1		0
Configuration	LTR				LTR			
Upstream Signal		0				0		
N nor Street		Northbound				Southbou	ind	
Mayement ·	7	8	9		10	11		12
	L	Т	R		L	Т		ृR
V ume (veh/h)	23	5	28		15	5		15
Pak-Hour Factor, PHF	0.92	0.92	0.92		0.92	0.92		0.92
Hourly Flow Rate, HFR (v■h/h)	24	5	. 30		16	5		16
Prcent Heavy Vehicles	2	2	2		2	2		2
Percent Grade (%)		0			***	0	1	
Fered Approach		N				T N		
Storage		0				0		
RT Channelized			0			 		0
Lines	0	1	0		0	1		0
Configuration	 	LTR			U	LTR		U
Delay, Queue Length, ar	nd Level of Serv					1 2//		
A proach	Eastbound	Westbound	·	Northbound		T	Southbound	
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LTR	LTR	····	LTR	 	-	LTR	 '-
v reh/h)	97	17		59	<u> </u>	 	37	
C (m) (veh/h)	1055					 	!	
		1275		312		-	269	 -
V.	0.09	0.01		0.19	<u> </u>	ļ	0.14	
9 queue length	0.30	0.04		0.68			0.47	
Control Delay (s/veh)	8.8	7.9		19.2			20.5	
LS	Α	Α		С			С	
Approach Delay (s/veh)				19.2			20.5	
Approach LOS				С			С	

right © 2005 University of Florida, All Rights Reserved

Generated: 2/16/2006 10:00 AM

E15

	1	WO-WAY STO	P CONTR	ROL SUM	MARY			
General Informatio				Informati				***************************************
Analyst	R Peasi	ee/V Haskell/J Bavo		ection		Damon/F	-uerte	
Agency/Co.	Darnell	& Associates Inc		liction			Westbound 5	
Date Performed	02/09/2			sis Year		2030 w/	Proiect	
Analysis Time Period	MID Pea				***************************************			
Project Description 03	80204 - Fuerte F	arms						
East/West Street: Fuer			North/	South Stree	et: <i>Damon</i>	Lane	·	
Intersection Orientation:				Period (hrs				
Vehicle Volumes a	nd Adjustme	nts		transfer of a	1		V. 1	
Major Street		Eastbound				Westboo	und	·····
Movement	1	2	3		4	5		6
	L	Т	R		L	Т	·	R
Volume (veh/h)	70	143	37		17	225		30
Peak-Hour Factor, PHF Hourly Flow Rate, HFR	0.92	0.92	0.9	2	0.92	0.92		0.92
(veh/h)	76	155	40		18	244		32
Percent Heavy Vehicles	2				2	 		
Median Type	·			Undivide	ed			
RT Channelized	·		0					0
Lanes	0	1	0		0	1		0
Configuration	LTR	·			LTR			
Upstream Signal		0		· ·		0		
Minor Street		Northbound				Southbox	ınd :	
Movement	7	8	9		10		4110	12
	L	Т	R		L			R
Volume (veh/h)	16	5	41		15			20
Peak-Hour Factor, PHF	0.92	0.92	0.92	2	0.92			0.92
Hourly Flow Rate, HFR (veh/h)	17	5	44		16	5.		21
Percent Heavy Vehicles	2	2	2		2	2		2
Percent Grade (%)	*,						!	۲-
Flared Approach		N					T	
Storage		0	1			-		
RT Channelized			0			+ -		
Lanes	0	1	0		0	+		0
Configuration		LTR	† – <u> </u>					0
Delay, Queue Length, a	nd Level of Ser					LIN		
Approach	Eastbound	Westbound		Northbound		+	Novith bornad	
Vovement	1	4	7	8	9			·
_ane Configuration	LTR	LTR			+ =	10	 	12
/ (veh/h)	76	18		LTR	 	-	<u> </u>	
C (m) (veh/h)	1287			66	<u> </u>		}	<u></u>
//c		1378		586	<u> </u>			
	0.06	0.01		0.11			0.09	
35% queue length	0.19	0.04		0.38			0.29	
Control Delay (s/veh)	8.0	7.6		11.9		·	13.3	
.OS	Α	Α		В			В	
Approach Delay (s/veh)				11.9				1
Approach LOS		<u></u>		В		1	В	

opyright © 2005 University of Florida, All Rights Reserved

HCS+TM Version 5.2

Generated: 2/16/2006 10:00 AM



•	~ ₅ ~	νı	4

	T\	WO-WAY STOP	CONTR	OL SUM	MARY			
General Information		***************************************	Site I	nformatio	on			
alyst	R Peasle	e/V Haskell/J Bavos				Damon/F	uerte	
ency/Co.	Darnell &	Associates Inc	Jurisd				San Diego	
Date Performed	02/09/200	06		sis Year		2030 w/ F		
Analysis Time Period	PM Peak						<u>-</u>	
Foject Description 0302	204 - Fuerte Fa	rms						
East/West Street: Fuerte				South Stree		ane		Z. See See See See See See See See See Se
Intersection Orientation:	East-West		Study	Period (hrs)	: 0.25			
Whicle Volumes and	d Adjustmen	ts	• •					je v
Major Street		Eastbound				Westbou	ınd	· .
Mevement	1	2	3		4	5		6
	<u> </u>	Т	R		· L	Т		R
Volume (veh/h)	5	208	12		12	160		5
Peak-Hour Factor, PHF	0.92	0.92	0.92	2	0.92	0.92		0.92
Hourly Flow Rate, HFR (veh/h)	5	226	13		13	173		5
Percent Heavy Vehicles	2		-		2			
M dian Type				Undivide	d .			
RT Channelized			0					0
Lanes	0	. 1	0		0	1		0
Chfiguration	LTR				LTR			
Upstream Signal		0				0		
Minor Street		Northbound				Southbou	ınd	
M vement	7	8	9		10	11		12
	L	Т	R		L	Т		R
Volume (veh/h)	6	5	11		5	5		15
Pak-Hour Factor, PHF	0.92	0.92	0.92	2	0.92	0.92		0.92
Hourly Flow Rate, HFR (veh/h)	6	5	11.		5	5		16
P cent Heavy Vehicles	2	2	2		2	2		2
Percent Grade (%)		0	<u> </u>			0		
Flared Approach		N				T N		
torage	1	0				0		
RT Channelized			0					0
Lanes	0	1	0		0	1		0
Cifiguration		LTR	- ŭ			LTR		
Delay, Queue Length, and	I level of Serv					1 LIN		
Aproach	Eastbound	- Westbound		Northbound		·	Southbound	
Vement	1	4	7	8			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	40
Lane Configuration	LTR	LTR			9	10	11	12
v eh/h)				LTR			LTR	
	5	13		22			26	
C(m) (veh/h)	1398	1328		616			675	
//c	0.00	0.01		0.04			0.04	
How queue length	0.01	0.03		0.11			0.12	
Control Delay (s/veh)	7.6	. 7.7		11.1			. 10.5	
-06	A	Α		В			В	
Approach Delay (s/veh)			*************************************	11.1	· · · · · · · · · · · · · · · · · · ·		10.5	1
Approach LOS				В			В	

Generated: 2/16/2006 10:00 AM

ight © 2005 University of Florida, All Rights Reserved

APPENDIX F

➤ Project Access Analysis Worksheets

	TV	VO-WAY STOP	CONTRO	L SUMM	IARY			
General Information		,	Site In	formatio	n			
A slyst	V Haskell	/R Peaslee/J Bavos	Intersec	tion		Fuerte Drive	/Project A	ccess
ency/Co.	Darnell &	Associates, Inc.	Jurisdict	tion		County of S		
ate Performed	02/09/200	6	Analysis	Year		Existing Plu	s Project	
alysis Time Period	AM Peak	Hour						
ect Description 03020		าร					1.	
ast/West Street: Fuerte D					: Project /	Access		
rsection Orientation: E	ast-West		Study Pe	eriod (hrs):	0.25			
hicle Volumes and	Adjustment	t s de la	•					
ajor Street		Eastbound				Westbound		
rement	1	2	3		4	5		6
	<u> </u>	T	R		L	T		R
olume (veh/h)	0.75	183	5		3	327		7,-
k-Hour Factor, PHF	0.75	0.75	0.75		0.75	0.75	0	.75
urly Flow Rate, HFR eh/h)	0	244	6		4	436		0
ercent Heavy Vehicles	0				2			
tian Type			,	Undivided	1			
T Channelized			0					0
nes ·	0	1	0		0	1		0
figuration			TR		LT .			
pstream Signal	<u> </u>	. 0	1			0		
or Street		Northbound				Southbound	d	
rement	7	8	9		10	11		12
	L L	Т	R		L	Т		R
ume (veh/h)	12		8					
k-Hour Factor, PHF	0.75	0.75	0.75		0.75	0.75	1 0	.75
ourly Flow Rate, HFR eh/h)	16	. 0	10		0	0		0
cent Heavy Vehicles	2	0	2		0	0		0
ercent Grade (%)		0				0		
ared Approach		N				. N		
torage		0				0		
T Channelized			. 0					0
es	0	0	0		0	0		0
figuration		LR						
elay, Queue Length, and	Level of Serv	ice						
roach	Eastbound	Westbound		Northbound		So	uthbound	
vement	1	4	7	8	9	10	11	12
ne Configuration		LT		LR				
eh/h)		4		26				
(m) (veh/h)		1316		502		+		
(III) (VCIVII)		0.00		0.05				
augus lor eth		 				-	·	
dueue length		0.01	i	0.16				

 Lane Configuration
 LT
 LR

 (m) (veh/h)
 4
 26

 (m) (veh/h)
 1316
 502

 (a) Queue length
 0.00
 0.05

 (a) Queue length
 0.01
 0.16

 (a) Control Delay (s/veh)
 7.7
 12.6

 (a) Approach Delay (s/veh)
 - -

 Approach LOS
 - -

right © 2005 University of Florida, All Rights Reserved

HCS+TM Version 5.2

Generated: 2/15/2006 3:23 PM

	T	WO-WAY STOP (CONTRO	OL SUMI	MARY			
General Information				nformation				
Analyst	V Haskei	I/R Peaslee/J Bavos	Interse	ection		Fuerte D	rive/Project A	lccess
Agency/Co.	Darnell 8	Associates, Inc.	Jurisdi				f San Diego	100033
Date Performed	02/09/20	06	Analys	is Year			Plus Project	
Analysis Time Period	Mid-Day							
Project Description 03	0204-Fuerte Fari	ms						
ast/West Street: Fuert			North/S	outh Stree	t: Project	Access		
ntersection Orientation:	East-West		Study F	Period (hrs)	: 0.25			***********
/ehicle Volumes ar	nd Adjustmen	its						
lajor Street	·	Eastbound				Westbou	ınd	
Movement	1	2	3		4	5	1	6
	L	Т	·R		Ĺ	T		R
olume (veh/h)		124	15		10	180		
eak-Hour Factor, PHF	0.71	0.71	0.71		0.71	0.71).71
lourly Flow Rate, HFR /eh/h)	0	174	21		14	253		0
ercent Heavy Vehicles	0				2			
ledian Type	·			Undivide	d			=
T Channelized			0		·			0
anes	0	1	0		0	1		0
onfiguration			TR		LT	<u> </u>		
pstream Signal		0				0		
inor Street		Northbound				Southbox	und	
lovement	7	8	9		10	11	and	12
	L	T	R		L	Т		R
olume (veh/h)	6		4					
eak-Hour Factor, PHF	0.71	0.71	0.71		0.71	0.71	0	.71
ourly Flow Rate, HFR eh/h)	8	0	5		0	0		0
ercent Heavy Vehicles	2	0	2		0	0		0
ercent Grade (%)		0				0		
lared Approach		N				N		
Storage		0				0		
T Channelized			0			+		0
anes	0	0	0		0	0		0
onfiguration		LR			<u> </u>	+		<u> </u>
elay, Queue Length, ar	nd Level of Serv							
oproach	Eastbound	- Westbound		Northbound			Southbar	
ovement	1	4	7		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		Southbound -	
ne Configuration		LT		8	. 9	10	11	12
veh/h)				LR 10		<u> </u>		
(m) (veh/h)		14		13		ļ		
(III) (VeII/II)		1378		638			·	
,		0.01		0.02				
0/		0.03		0.06				
% queue length ontrol Delay (s/veh)		7.6		10.8				
ontrol Delay (s/veh)				10.8 B				
		7.6						

opyright © 2005 University of Florida, All Rights Reserved

HCS+TM Version 5.2

Generated: 2/15/2006 3:23 PM



	TV	NO-WAY STOP	CONTRO	OL SUM	MARY				
General Information				formati	on				
Alyst	V Haskell	/R Peaslee/J Bavos	Intersection			Fuerte Drive/Project Access			
ency/Co.	Darnell &	Associates, Inc.	Jurisdic	ction		County of San Diego			
ate Performed	02/09/200		Analysi	is Year		Existing Plus Project			
alysis Time Period	PM Peak	Hour							
ect Description 030)204-Fuerte Farn	ns						16. 1.	
ast/West Street: Fuerte	e Drive	·	North/S	outh Stree	t: Project	Access		.ie	
rsection Orientation:	East-West			North/South Street: Project Access Study Period (hrs): 0.25					
hicle Volumes an	d Adjustmen	ts							
ajor Street		Eastbound				Westbound		· · · · · · · · · · · · · · · · · · ·	
rement	1	2	3		4	5		6	
	L	Т	R		L	T		R	
olume (veh/h)		142	. 15		10	117			
k-Hour Factor, PHF	0.84	0.84	0.84		0.84	0.84	1.0	0.84	
rly Flow Rate, HFR eh/h)	0	169	17		11	139		0	
cent Heavy Vehicles	0				2				
lian Type				Undivide	d	•			
T Channelized			0					0	
es	0	1	0		0	1		0	
figuration			TR		LT	- 			
ostream Signal		0				0			
or Street		Northbound				Southbound			
rement	7	7 8			10	11	iiu ,	12	
	T i	T	9 R		L	T		. R	
ıme (veh/h)	6		4				Ţ N		
k-Hour Factor, PHF	0.84	0.84	0.84		0.84	0.84		0.84	
ourly Flow Rate, HFR									
a h /h)	7	0	4	4 0		0		0	
cent Heavy Vehicles	2	0	2	2 0		0		0	
ercent Grade (%)		0				0			
ed Approach		N					N		
torage		0				0			
Γ Channelized		 	0			+ -			
es	0	0	0			1		0	
figuration		LR LR	U		0	0		0	
	1								
elay, Queue Length, an						-			
roach	Eastbound	Westbound	Northbound		<u> S</u>	outhbound			
ement	1	4	7	8	9	10	11	12	
ne Configuration		LT		LR					
eh/h)		. 11		. 11					
(m) (veh/h)		1388		716					
		0.01	0.02					 	
queue length		0.02	0.05		 			1	
ontrol Delay (s/veh)		7.6		10.1	+			-	
- into i boldy (or veri)			-					 	
rook Delevi (/ J.)		Α		В	1			<u></u>	
proach Delay (s/veh)			~~~	10.1					
proach LOS	<u></u>		В						

1 450 1 01 1

		NO-WAY STOP	CONTR	OL SUM	IMARY					
General Information				Site Information						
Analyst		I/R Peaslee/J Bavos	Interse	ection		Fuerte Drive/Project Access				
Agency/Co.		Associates, Inc.	Jurisd	iction			San Diege			
Date Performed	02/09/200		Analys	sis Year		2030 w/ Project				
Analysis Time Period	AM Peak									
	204-Fuerte Farr	ns				-				
East/West Street: Fuerte Drive					et: <i>Project</i>	Access				
Intersection Orientation: East-West			Study	Study Period (hrs): 0.25						
ehicle Volumes an	d Adjustmen	ts								
Major Street		Eastbound			***************************************	Westbou	Westbound			
Movement	1	2	3	3 4		5		6		
	L	T	R		L	Т		R		
/olume (veh/h)		268	4		2	476				
Peak-Hour Factor, PHF	0.92	0.92	0.92	2	0.92	0.92		0.92		
Hourly Flow Rate, HFR veh/h)	0	291	4		2	517		0		
Percent Heavy Vehicles	0				2					
Median Type				Undivide						
RT Channelized			0 Ondivided			0				
anes	0	1	0		0	1		0		
Configuration			TR		LT	 				
Jpstream Signal		. 0				0				
Minor Street		Northbound						Southbound		
Movement	7	8	9		10	11	-	12		
	L	Т	R		L	T		R		
/olume (veh/h)	10		7		·	·				
Peak-Hour Factor, PHF	0.92	0.92	0.92		0.92	0.92		0.92		
lourly Flow Rate, HFR veh/h)	10	0	7		0	0 -		0		
Percent Heavy Vehicles	2	0								
Percent Grade (%)	+		2		0	0		0		
Flared Approach		0				0				
		N	-			N		T		
Storage		0				0				
RT Channelized			0					0		
anes	0	0	. 0		0	0		0		
Configuration	<u> </u>	LR								
elay, Queue Length, an					·					
pproach	Eastbound	Westbound		Northboun	nd		outhbound	bound		
lovement	1	4	7	8	9	10	11	12		
ane Configuration		LT		LR						
(veh/h)		2		17						
(m) (veh/h)		1266		444				1		
C C		0.00		0.04						
5% queue length		0.00		0.12						
ontrol Delay (s/veh)		7.8	· · · · · · · · · · · · · · · · · · ·	13.4				+		
os		A		13.4 B		 				
pproach Delay (s/veh)		A		13.4		+				
						_	•			
pproach LOS				<u> </u>			HCS+TM Version 5.2 Generated: 2/16/2006			

A comparison Site Information Fuerte Drive/Project Access Interesection Fuerte Drive/Project Access Interesection County of San Diago Dameil & Associates, Inc. Date Performed 02/09/2006 Palysis Time Period Mid-Day Pulpet Description 030204-Fuerte Farms Fuerte Drive North/South Street Project Access Study Period (hrs): 0.25 Pulpet Description County of San Diago Pulpet Description County Street Project Access Pulpet Description Pulpe	8	T	WO-WAY STOP	CONTR	OL SUM	MARY					
Description	General Information			Site I	Site Information						
Dare Reformed O2/09/2006 Date Performed O3/000/4-Performed O3/0000/4-Performed O3/0000/4-Performed O3/0000/4-Performed O3/0000/4-Performed O3/0000/4-Performed O3/0000/4-Performed O3/00000/4-P		V Haskel	I/R Peaslee/J Bavo	s Interse			Fuerte Drive/Project Access			Access	
Date Performed O2/09/20/06 Mid-Day Project Mid-Day Project Description O3/02/04-Fuerte Farms Study Period (hrs) O.25				Jurisd							
North/South Street			06	Analys	sis Year						
Parection Orientation: East-West			ns						- 4		
Vehicle Volumes and Adjustments Eastbound Westbound Worthbound Southbound Westbound West				North/S	South Stree	et: <i>Project i</i>	Access	, ĝ.	Ng		
Major Street	Ir ersection Orientation:	East-West		Study I	Period (hrs): 0.25		, Ť	g W		
Major Street	Vehicle Volumes an	d Adjustmen	ts								
Newment	Major Street						Westbound				
Volume (veh/h)	Vement	1		3		4				6	
Re-Hour Factor, PHF		L		R		L	Т			R	
Veh/h 0						8 :	267	`			
(veh/h) 0 202 14 8 290 0 P cent Heavy Vehicles 0 - - 2 - - M dian Type Undivided RT Channelized 0 1 0 1 0 Les 0 1 0 0 1 0 Upstream Signal 0 0 1 1 0 0 1 0		0.92	0.92	0.92	2	0.92	0.92		C	0.92	
Procent Heavy Vehicles	(veh/h)	0	202	14		8	290			0	
Main Type	<u> </u>	0		-		. 2					
RT Channelized	M dian Type				Undivide						
Les				0	Charvide	,u				0	
Description Description		0	1			0	+				
Upstream Signal							7			-	
Northbound Southbound Verment 7			0	1		<u> </u>			-		
Value Valu											
L T R L T R		7		9	9 10				12		
Jame (veh/h) 5		L									
Second Second	√ ume (veh/h)	. 5					12.				
Hourly Flow Rate, HFR S D S D D D D D D D	k-Hour Factor, PHF	0.92	0.92				0.92			0.92	
Cent Heavy Vehicles 2		5	0	3			1				
Delay, Queue Length, and Level of Service Delay, Queue Length Delay Delay Configuration LT LR Delay Configuration Delay											
N	Tomition y Tomicio			2		0			0		
Comparison Com				T							
Channelized											
Configuration			0				0				
Configuration LR Delay, Queue Length, and Level of Service Auroach Eastbound Westbound Northbound Southbound Movement 1 4 7 8 9 10 11 12 age Configuration LT LR IR IR <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td colspan="2"></td> <td colspan="2">0</td>									0		
Delay, Queue Length, and Level of Service A roach Eastbound Westbound Northbound Southbound Movement 1 4 7 8 9 10 11 12 ane Configuration LT LR Image: LR	es	0		0		0	0		0		
Auroach Eastbound Westbound Northbound Southbound Movement 1 4 7 8 9 10 11 12 ape Configuration LT LR Image: LR I								1			
Movement 1 4 7 8 9 10 11 12 ane Configuration LT LR LR Image: Configuration of the configuration of the					CONTRACT OF PERSON STORY, 1 SECTION . Lawsen .			75.1 Street man			
Lane Configuration LT LR Veh/h) 8 8 C (m) (veh/h) 1354 602 V/I 0.01 0.01					Northboun	d	South		bound		
(m) (veh/h) 8 8 (m) (veh/h) 1354 602 (n) (veh/h) 0.01 0.01		1	4	7	8	9	10	1	1	12	
C (m) (veh/h) 1354 602 U 0.01 0.01			LT		LR						
0.01 0.01	eh/h)		8		8						
	C (m) (veh/h)		1354	· · ·	602			T			
	1		0.01		0.01		1	T			
queue length 0.02 0.04	queue length		0.02					 			
Control Delay (s/veh) 7.7 11.1	Control Delay (s/veh)		7.7					1			
A B	(+	 			
Approach Delay (s/veh) 11.1	opproach Delay (s/veh)					.1		1	i		
Approach LOS B							 	<u> </u>			

roach LOS -ight © 2005 University of Florida, All Rights Reserved

HCS+TM Version 5.2

Generated: 2/16/2006 9:59 AM



	T\	WO-WAY STOP	CONTR	OL SUM	MARY		·			
General Information				Site Information						
Analyst	V Haskel	I/R Peaslee/J Bavos	Intersection			Fuerte Drive/Project Access				
Agency/Co.	Darnell &	Associates, Inc.		Jurisdiction						
Date Performed	02/09/200	06		Analysis Year			County of San Diego 2030 w/ Project			
Analysis Time Period	PM Peak	Hour								
Project Description 030	204-Fuerte Farr	ns								
East/West Street: Fuerte		:	North/	North/South Street: Project Access						
Intersection Orientation:	East-West		Study Period (hrs): 0.25							
Vehicle Volumes and	d Adjustmen				-					
Major Street		Eastbound				Westbou				
Movement	1	2	3			5		6		
	L	T	R		L	Т		R		
Volume (veh/h)	 	211	13		8		172			
Peak-Hour Factor, PHF	0.92	0.92	0.92	2	0.92	0.92		0.92		
Hourly Flow Rate, HFR (veh/h)	0	229	14		8 .	186		0		
Percent Heavy Vehicles	0				2					
Median Type		·		Undivide	∍d					
RT Channelized			0			7		0		
Lanes	0	1	0			1		0		
Configuration			TR	TR LT		·		· · · · · · · · · · · · · · · · · · ·		
Upstream Signal		0	·			0				
Minor Street		Northbound				Southbound				
Movement	7	8	9	9 10		11		12		
	L	Т	R		L	T		R		
Volume (veh/h)	5		3							
Peak-Hour Factor, PHF	0.92	0.92	0.92	0.92 0.92		0.92		0.92		
Hourly Flow Rate, HFR (veh/h)	5	0	3			0		0		
Percent Heavy Vehicles	2	0	2		0	0		0		
Percent Grade (%)		0				0				
Flared Approach		N				T N				
Storage		0				0				
RT Channelized		-	0			 		0		
Lanes	0	0	0		0	0		0		
Configuration		LR			<u> </u>	+		U		
Delay, Queue Length, and	d Level of Serv			1						
Approach	Eastbound	Westbound		Northboun	d	T	Southbou	ınd		
Movement	.1	4	7	8	9	10	11	12		
Lane Configuration		LT		LR		+ ' -	<u> </u>	12		
v (veh/h)		8	·····	8		 				
C (m) (veh/h)		1323		642	+					
v/c		0.01		0.01	-		 			
95% queue length		0.02								
				0.04		· .	ļ			
Control Delay (s/veh)		7.7		10.7						
LOS	·	Α		В						
Approach Delay (s/veh)				10.7						
Approach LOS				В						

opyright © 2005 University of Florida, All Rights Reserved

HCS+TM Version 5.2

Generated: 2/16/2006 9:56 AM



APPENDIX G
➤ Sight Distance Photos

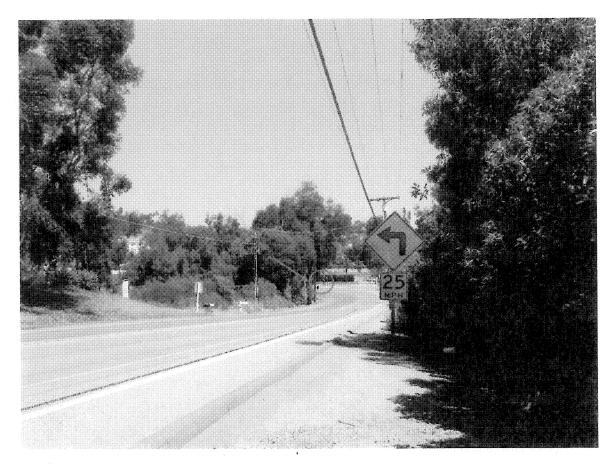
	_
	_
	_
	_
	-
	_
	_
	-



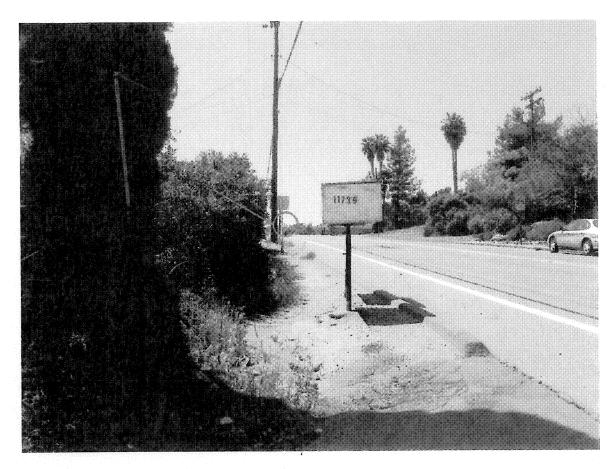
Fuerte Dr/ Project Access – Looking East (15' back from edge line \approx 139')



Fuerte Dr/Project Access – Looking West (15' back from edge line ≈ 116 ')



Fuerte Dr / Project Access – Looking East (10' back from edge line ≈ 505 ')



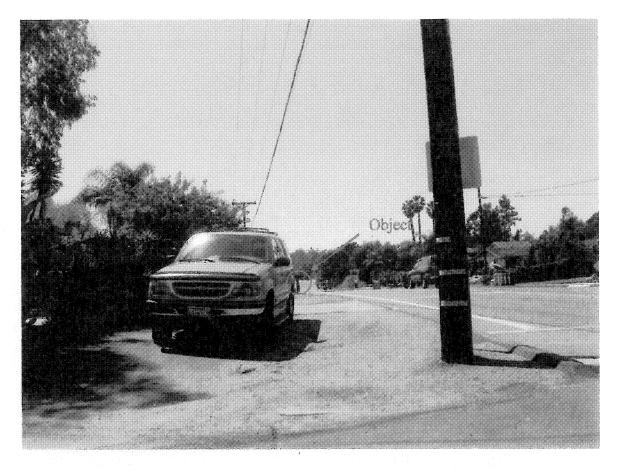
Fuerte Dr / Project Access – Looking West (10' back from edge line ≈ 463 ')



Looking from East (WB) on Fuerte @ Project Access - 475'



Looking from West (EB) of Fuerte @ Project Access - 500'



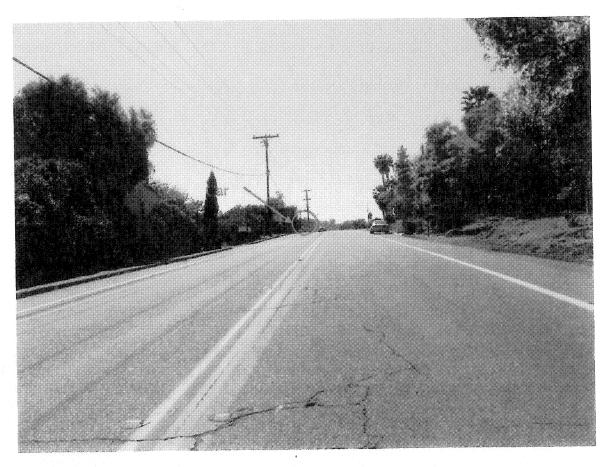
Fuerte Dr / Damon Lane – Looking West (10' back from edge line ≈ 373 ')



Fuerte Dr / Damon Lane – Looking East (10' back from edge line ≈ 365 ')



Looking @ Damon from West (EB) on Fuerte - 490'



Looking @ Damon From East (WB) on Fuerte - 550'

APPENDIX H

> Collision Records

> Speed Survey for Fuerte Drive

Collision Records

TRAFFIC ACCIDENTS REPORT 00/00/00

20

00/00/00		T M D AG S OTHER ASCEAL D V B CRE V V	TL SUBA /N	A P N G 68	A A N G 48	ABAG 45	2	X	N K K K K K K K K K K K K K K K K K K K	4 M Z	AANG 68 P	ABNG 23 4	N/ AAWG 31 K	ACEG 33 M	A B K L D A N G	B S G 28 F	AEEG 51	T.BWCTT.	LENGTH: 400'		M M G 21 M		LENGTH: 1770	OTHER ASCRAC P V B SAR F Y C	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	22107 / DBEG 19 NC 21460A / ABER 00 11	
		* O M	اح	۵	ď	40	-	্ৰ	n	, .	re	: -		Ç 🚓	4	ظ خ ر					B			尺 ① 25 5	6	A 4	
		I DAD N		000 /	000				000			COO		BOI	0 0 0	S		3		2 >I	IO3			H Z >	CO	103	
		ထိလ	<	A H	A H	Æ	4	4	B H/	A H	A H			H		A H/		O MA	i	ROAD	A H/		A DR	ROAD S CON	/#		
		LIT		DAY	DAY			DAY	DAY	DAY	DAY	DAY				DRK		MAYAPAM DR		LIT	NST		МАХАРАН DR	R(DAY A	DAY A DRK A	
		P WEA		1 CLR	3 CLR	C. C.	L CLR	CLD 1	RAI	CLR	C.R.	CER				3		AND		WEA	CLR			WEA	CLR	CLD	
		GRP	003	021	003	012	001	001	003	021	012	001	£00	601	F 0 0			Z	•	GRP	008		AKO	GRP	600	003	
		PRIMB PACTOR	20	. 90	20	53A	52A	52A	90	9	26	2A		Z. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2.	5					E K	4			K	Æ		
	BL		\$ 22350	1 22106	22350	21453A	23152A	23152A	22350	22106	214530	23152A	22350	23152A	6	2		17		PRIME PACTOR	22107	æ ≥	≯	PRIME PACTOR	21804A	22350 22350	
	AND AVOCADO BL	COLL	RBAR	REAR	REAR	BROD	RBAR	REAR	REAR	REAR	BROD	SIDE	OVER	CBJT	100	2000		BETW AVOCADO BL		COLL	OBJT	PAN DR	brtu mayapan dr	COLL	BROD :	OBJT COBJT	
) AVO	8	*	*				*	₩.	*		٠		*	. •			AVOC		000		and mayapan	layad	D 004	æ	* *	
	AM	-SEVERITY-	0	0	7	7	-	Ö	0	0	-	0	0	00	· -			BTW	į		0	AND C	RTW)	- Pul	-	00	
		SEVER!	0	٠ •	6	. 2	9	0	6		1	0	2	Б Н	•	,		щ		V VIS C/F	· el		Ħ	SEVERITY V VIS C/	0	00	
		(c)	0	6	•	_		٥		0	Φ	•		00	Ç				i	SBV	0	•		SRV	0	0 0	
	٠,	TEAT						_	Ū	J	Ψ.	٥	0	00	•					FAT		Z.		PAI	•	0 0	
	FUBRTB DR	DISTANCE	, 6	0	•	0		0	ŏ	0	ō	0	0	- - -	6			241 FUERTE DE	2000	FROM	147'W	FUBRIE DR THIS LOCATION	E DR	DISTANCE	447'B	40'W 800'W	
	PUE	TIME	06130	15:10	10:53	15:40	20:20	14:55	18:10	12:40	14:30	43	05	15:50	55			FUER	2	i	35	FURRIE OR HIS LOCAT	FURRTE DR	i			
		점 []		WE 1			3U 20		FR 18	TU 12	SA 14	R 08:43			3 21:5			241		TIME	22:35		242	TIME	08:35	06:25 04:20	
	28-		/12	/10	128	/18	/16	/17				27 FR		10 MO	13 E		٠	28-		DA	7. WB	241- ENTS F		8	6 FR	7 S. E. E. E. E. E. E. E. E. E. E. E. E. E.	
	ž.	DATE	99/01/12 TU	99/02/10	99/06/28 MO	91/60/66	97950 00/04/16 SU	00/04/17 MO	00/04/21	99878 00/12/26	01/02/17	01/04/27	01/07/12	01/11/10	07507 03/06/13 PR					DATE	01/11/07 WB	= =	241	DATE	99/04/16	00/10/07 00/11/16	
	LOCATION	REPRT	93949	94222	95319	12656	026		97794 0	978 0					07 03			LOCATION		ti.	10 91 91	TTON O AC	TION		66 9	00 6	
	BPAGE 보	ם	6	<u>4</u>	25		۾ DEC				<u>7</u> 30321	3 01000	01723	03055	075	. •		100	٠	REP	7 02816 01/ 88	TOCE	TLOCATION	REPRT	9481	27 7 3 3 4 9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
						Ű,		⊶ 1₹V	J _	r		·••							t	SCUP	и488	56	PI:01	. 10	62/	۲/90 کا	

	OTHER ASCERC B V R SAF E X S N/ D B N G 29 M A N/ D B N G 20 M A	LENGTH: 740' T K D AG S OTHER ASCERC P V R SAF E X S N/ A C B G 21 M A	LENGTH: 880°		Length; 390'		LENGTH: 360.		Length: 980'		
	GRP WEA LIT S COM V W D 026 CLR DAY A H / COO A A	AND KAREN WY I R P ROAD N O B GRP NEA LIT S CON V W D 003 CLR NSL A H/ I 09 D A	AND FURKTE FARMS RD		AND LOREMA IN		AND VERNETTE DR		AND DAMON LIN		
AND MAYAPAN DR E	FAT SEV VIS C/P PDO TYPE FACTOR 0 0 0 0 * BROD 21802A	SEV VIS	AND KAREN WY BETW KAREN WY	AND FUERTE FARMS RD	BEIN PUBRIE FARMS RD	AND LORBNA LN	BRIW LORENA LAN	AND VERWETTE DR	BRIW VERNETIE DR		
LOCATION 242- FUBRIE OR	NEBRTDATE DA TIME FROM 06858 03/03/20 TH 06:50 0:		HNO ACCIDENTS FOR THIS LOCATION G O LOCATION 28184-28187 FURRIE DR LNO ACCIDENTS FOR THIS LOCATION	SLOCATION 28187- FUERTE DR DNO ACCIDENTS FOR THIS LOCATION C	LOCATION 28187-28181 FUERTE ORNO ACCIDENTS FOR THIS LOCATION	LOCATION 28181- FUERTE DRNO ACCIDENTS FOR THIS LOCATION	JOCATION 28181-28174 FUERTE DR NO ACCIDENTS FOR THIS LOCATION	TOCATION 28174 FUERTE DR	COCATION 28174-29773 FUERTE DRNO ACCIDENTS FOR THIS LOCATION	⊳T:ØT	⊅ 002/37/50

LOCATION 29773-	FURRTE DR	R AND DAMON IM		
DISTANCE DATE DA TIME FROM PAT	DISTANCE	NCRSKVRRITY COLL PRIME M PAI SKV VIS C/P PDO IYPE PACTOR	I R P ROAD N O E CRP WEA LIT S CON V N D	OTHER ASCEAC D V R SAF E X S
95259 99/06/26 SA 11:35 0'	:35 0'	. 0 0 0 0 * BROD 21802A	026 CLR DAY A H/ COO A A	N/ DRNG 49 MA N/ DBRG 29 MA
LOCATION 29773-28176 FUERIR DR	FUERTE DR	R BETW DAMON LAN	AND SHADOW GLEN	LENGTH: 2820'
REPRIDATE DA LIME	DISTANCE	MCBSEVERITY COLL PRIME M FAI SEV VIS C/P PDO IYPE FACTOR	ROAD NEA LIT S CON V W D	OTHER ASCEACE PVR SAFEX
99657 00/11/20 NO 13:05 528'W 01544 03/06/06 FR 05:30 31'R	:05 528'W	'W 0 0 0 0 COLT C	018 CLR DAY A H/ I10 D A 001 CLR DSK A H/ I01 D A	N/ A C E G 68 F A 22107 / C B R W 53 M B

Speed Survey for Fuerte Drive

RADAR SPEED SURVEY

SAN DIEGO COUNTY TRAFFIC ENGINEERING

Fuerte Dr 510' E/o Karen Way

DATE: 10-1	13-04	TIME START: 9 AM	TIME END): 11:30 AM	WEATHER: clear ROAD TYPE: good
DIRECTION	: XBT	SPEED LIMIT: 35	mph observer	: S. Mockler	CALIBRATION TEST: Y
SPEED	FREQUENCY	Fi*Xi	ACUM TOTAL	ACUM &	PERCENTAGE BREAKDOWN
30				~~~~~~,	0
31	2	60	2	1.0	***
32	8	248	10	5.2	****
33	11 5	352	51	10.8	******
	_	165	26	13.4	****
34 .	1.2	408	38	19.6	*******
35	21	735	59	30.4	****
36	14	504	73	37.6	****
37	14	518	₿ 7 ·	44.8	*******
38	.18	684	105	54.1	********
39	12	468	117	60.3	*********
40	10	400	127	65.5	*******
41	10	410 .	137	70.6	******
. 42	16	672	153 .	78.9	****
43	9	387	162	83.5	*****
44	10	. 440	172	88.7 -	* *****
45	6	270	178	91.8	*****
46	4	184 .	182	. 93.8	****
47	6	282	188 .	96.9	****
48	2	96	190	•	1***
49	2	98	192	99.0	
50	1	50	193		**
51	ļ	51.	194	100.0	**
	194	7482			- 05101520
AVERAGE	_		PACE + 34		SAMPLE VARIANCE = 21.78044
	CENTILE = 3		* IN PACE =		STANDARD DEVIATION = 4.666952
	CENTILE = 4		VEHICLES IN	PACE = 136	
	CENTILE = 4 CENTILE = 4				RANGE 2*S = 96.90722
					RANGE 3*S = 100

APPENDIX I

➤ Responses to County Comments

CAN THE THE STATE OF THE STATE

e gasa te



MEMORANDUM

DATE:

December 6, 2004

TO:

Hedy Levine, REC Consultants

FROM:

Vicki S. Haskell, P.E. V5+

D&A Ref. No: 030204

RE:

Fuerte Ranch (TM 5343) - Responses to County Comments

Darnell & Associates, Inc. has reviewed the County of San Diego's August 20, 2004 comments on our May 21, 2004 Traffic Study for the Proposed Fuerte Ranch (TM 5343) project. The following summarizes our responses to each of the County's comments. The responses have been incorporated into our latest submittal of the traffic study.

- Use (Strikeouts indicate deletions, underlines indicate additions) format, or other format Comment 1: (such as a cover letter) to clearly indicate where the information is in the document.
- Due to the extent of the revisions involved (updated existing traffic volumes, expanded Response 1: cumulative analysis, revised future conditions analysis), a strike-out/underline comparison between the two versions of the report would be difficult to follow, and was therefore, not completed. Our written responses, however, indicate where each of the changes to the report were made to address the County's comments.
- Comment 2: In light of the fact that the project is in close proximity to a school (which includes safety concerns) - Address/analyze the need for a left turn at the Fuerte Drive/Project access and Fuerte Drive/Damon Lane intersection.
- The need for left turn pockets at the Fuerte Drive/Project Access and Fuerte Drive/Damon Response 2: Lane intersections has been provided in Section V, pages 35 and 37, of the revised study.
- The traffic study should state that Fuerte Farms Road and Damon Lane are non-Circulation Comment 3: Element public roads.

030204-ResponsestoCounty08-20-04Comments-memo/12-04

Page 1 of 3

- Response 3: Both Fuerte Farms Road and Damon Lane are identified as being non-Circulation Element public roadways on page 7, Section II of the revised traffic study.
- Comment 4: In addition to comparing the SANDAG Series 8 SR-54 Corridor Study forecast data to the Series 9 forecast (Pg. 26), the Series 8 forecast data should also be compared to the forecast volumes in the current Series 10 2030 SANDAG traffic model.
- Response 4: The traffic study has been updated to incorporate the SANDAG Series 10, 2030 forecasts model. A detailed discussion on the future conditions analysis is provided in Section IV, page 28 of the revised traffic study.
- Comment 5: The traffic study should identify the distance between the project's proposed Fuerte Drive entrance to neighboring driveways/intersections along Fuerte Drive, especially the Damon Lane intersection. The intersection/driveway spacing should be consistent with the County's Public Road Standards (PRS Section 6).
- Response 5: The spacing between the project's proposed driveway and the neighboring driveways/intersections is discussed in Section V on page 36 of the revised traffic study.
- Comment 6: In the Access Alternatives section (Pg. 32), the traffic study states that residents do no want Damon Lane to be widened as a justification for the project not taking access from Damon Lane. Damon Lane is a public road, but according to the traffic study (Pg. 7) the current paved width is only 20 feet. The resident's concerns should be considered, but Damon Lane should be improved to Public Road Standards and to the satisfaction of the local fire district along the project frontage.
- Response 6: The developer will dedicate 30 feet of right-of-way for the future improvements/widening of Damon Lane but they are not proposing to make any improvements at this time. (See Section VIII, page 43 of the revised study.)
- Fuerte Drive (SA 920) is a Circulation Element Plan road. The propose project should take access from Damon Lane. The Valle De Oro Planning Group will most likely not approve the proposed project if it takes access via Damon Lane. Therefore, the project still proposes to provide access via Fuerte Drive and will file the necessary paperwork with the County to get access rights to Fuerte Drive.
- Comment 8: Sight distance assessment (Pg. 32 and elsewhere in the document) for Fuerte Drive needs to consider the minimum design speed of its Light Collector classification, which is 45 mph, and the 85th percentile speed (prevailing speed).
- Response 8: The sight distance assessment has been revised to reflect the minimum design speed of Fuerte Drive as being 45 mph, see Section V page 37 of the revised traffic study.
- Comment 9: A Traffic Control Plan (TCP) should be prepared to address the project's construction traffic impacts (Pg. 34).

- Response 9: Section VI, page 38, of the revised traffic study provides a discussion of the project's construction traffic impacts. The discussion provides a description of the haul routes, number of truck trips, etc. that are expected with the construction of the proposed project. A complete Traffic Control Plan for the project should not be required until after the project has been approved for development.
- Comment 10: The traffic study recommends a fair-share contribution for the project's cumulative impact to the Fuerte Drive/Chase Avenue intersection (Pg. 39). The traffic study should verify that there is an official improvement project in place for the Fuerte Drive/Chase Avenue intersection or the project will be solely responsible for constructing the intersection improvements.
- Response 10: The recommended mitigation measures have been revised accordingly. See Section VII, pages 43-45 of the revised report.
- Comment 11: Pg. 17, the Cumulative Analysis should include approved, pending, and anticipated projects.
- Response 11: The list of cumulative projects included in the analysis has been expanded. See Appendix B of the revised study for a complete list of the cumulative projects included in the analysis.
- Comment 12: The applicant should coordinate with the DPW Traffic section regarding this traffic study's recommendation (Pg. 36, bottom paragraph) that the County's Traffic Advisory Committee (TAC 858-874-4030) review the conditions surrounding the Fuerte Elementary School independently of the TM 5343 project and incorporate the results in this traffic study.
- Response 12: D&A will submit a request to the County Traffic Advisory Committee review the conditions surrounding the Fuerte Elementary School independently of the development of the proposed project. It may take several months for the TAC to review the conditions surrounding the Fuerte Elementary School, therefore, the results of the review can not be incorporated into the traffic study.

Please feel free to contact the office should you have any questions regarding our responses to each of the County's comments.

and the contract of the contra

TRANSPORTATION PLANNING & TRAFFIC ENGINEERING

MEMORANDUM

DATE:

April 13, 2006

TO:

Philip R Conrad Jr., Reynold's Communities

FROM:

Rebecca L. Peaslee, EIT

Vicki S. Haskell, P.E.

D&A Ref. No: 030204

Fuerte Ranch (TM 5343) - Responses to County Comments

Darnell & Associates, Inc. has reviewed the County of San Diego's August 20, 2004 comments on our May 21, 2004 Traffic Study for the Proposed Fuerte Ranch (TM 5343) project. D&A revised the report on December 6, 2004, however, due to the adoption of the TIF program, the report was revised again. The following is our summarizes our responses to each of the County's comments. The responses have been incorporated into our latest submittal of the traffic study.

- Comment 1: Use (Strikeouts indicate deletions, underlines indicate additions) format, or other format (such as a cover letter) to clearly indicate where the information is in the document.
- Response 1: Due to the extent of the revisions involved (updated existing traffic volumes, reduced number of dwelling units, revised future conditions analysis), a strike-out/underline comparison between the two versions of the report would be difficult to follow, and was therefore, not completed. Our written responses, however, indicate where each of the changes to the report were made to address the County's comments.
- Comment 2: In light of the fact that the project is in close proximity to a school (which includes safety concerns) - Address/analyze the need for a left turn at the Fuerte Drive/Project access and Fuerte Drive/Damon Lane intersection.
- Response 2: The need for left turn pockets at the Fuerte Drive/Project Access and Fuerte Drive/Damon Lane intersections has been provided in Section V, pages 28 and 29, of the revised study.
- Comment 3: The traffic study should state that Fuerte Farms Road and Damon Lane are non-Circulation Element public roads.

030204-ResponsestoCounty08-20-04Comments (2).wpd/2-06

- Response 3: Both Fuerte Farms Road and Damon Lane are identified as being non-Circulation Element public roadways on page 7, Section II of the revised traffic study.
- Comment 4: In addition to comparing the SANDAG Series 8 SR-54 Corridor Study forecast data to the Series 9 forecast (Pg. 26), the Series 8 forecast data should also be compared to the forecast volumes in the current Series 10 2030 SANDAG traffic model.
- Response 4: The traffic study has been updated to incorporate the SANDAG Series 10, 2030 forecasts model. A detailed discussion on the future conditions analysis is provided in Section IV, pages 21 and 23 of the revised traffic study.
- Comment 5: The traffic study should identify the distance between the project's proposed Fuerte Drive entrance to neighboring driveways/intersections along Fuerte Drive, especially the Damon Lane intersection. The intersection/driveway spacing should be consistent with the County's Public Road Standards (PRS Section 6).
- Response 5: The spacing between the project's proposed driveway and the neighboring driveways/intersections is discussed in Section V on page 29 of the revised traffic study.
- Comment 6: In the Access Alternatives section (Pg. 32), the traffic study states that residents do no want Damon Lane to be widened as a justification for the project not taking access from Damon Lane. Damon Lane is a public road, but according to the traffic study (Pg. 7) the current paved width is only 20 feet. The resident's concerns should be considered, but Damon Lane should be improved to Public Road Standards and to the satisfaction of the local fire district along the project frontage.
- Response 6: The developer will dedicate 30 feet of right-of-way for the future improvements/widening of Damon Lane. (See Section VIII, page 37 of the revised study.)
- Comment 7: Fuerte Drive (SA 920) is a Circulation Element Plan road. The proposed project should take access from Damon Lane.
- Response 7: The project still proposes to provide access via Fuerte Drive and will have a secondary access on Damon Lane. The project will file the necessary paperwork with the County to get access rights to Fuerte Drive.
- Comment 8: Sight distance assessment (Pg. 32 and elsewhere in the document) for Fuerte Drive needs to consider the minimum design speed of its Light Collector classification, which is 45 mph, and the 85th percentile speed (prevailing speed).
- Response 8: The sight distance assessment has been revised to reflect the minimum design speed of Fuerte Drive as being 45 mph, see Section V page 30 of the revised traffic study.
- Comment 9: A Traffic Control Plan (TCP) should be prepared to address the project's construction traffic impacts (Pg. 34).
- Response 9: Section VI, page 31, of the revised traffic study provides a discussion of the project's construction traffic impacts. The discussion provides a description of the haul routes,